						OF UTAH ATURAL RESOUI GAS AND MINII				AMENDED F	FORM	3
		APPLIC	CATION FOR	PERMIT TO DRI	LL			1. WELI	L NAME and NU	MBER State 28 13	3	
2. TYPE OF		RILL NEW WELL 📵	REENTER P&/	A WELL DE	EPEN WELL (	)		3. FIELI	D OR WILDCAT	WILDCAT		
4. TYPE OF	WELL	Oil Well	I Coalbe	d Methane Well: N	0			5. UNIT	or COMMUNITI	ZATION AGE	REEMEN	ГИАМЕ
6. NAME OF	OPERATOR		KGH OPERATIN	G COMPANY				7. OPER	RATOR PHONE	406 259-84	80	
8. ADDRESS	OF OPERATOR	PO	BOX 2235. Billi	ngs , MT, 59103				9. OPEI	RATOR E-MAIL	@tmhauptma	an.com	
	L LEASE NUMBER	₹		11. MINERAL OW FEDERAL	NERSHIP INDIAN	STATE (	FEE (	12. SUR	RFACE OWNERS	HIP	тате 🕡	) FEE
13. NAME C		NER (if box 12 = 'fee'	')					14. SUF	RFACE OWNER	PHONE (if be	ox 12 = 'f	ee')
15. ADDRES	SS OF SURFACE (	OWNER (if box 12 = '	'fee')					16. SUF	RFACE OWNER	E-MAIL (if b	ox 12 = '1	ee')
17. INDIAN	ALLOTTEE OR TR	RIBE NAME		18. INTEND TO C		PRODUCTION FF	ROM	19. SLA	INT			
(if box 12 =	· 'INDIAN')					gling Application)	NO 📵	VERT	CAL DIRE	ECTIONAL (	) HOR	IZONTAL 🗍
20. LOCAT	ION OF WELL		FO	OTAGES	Q.	TR-QTR	SECTION	Т	OWNSHIP	RANGE		MERIDIAN
LOCATION	AT SURFACE		1036 FS	SL 971 FWL	:	swsw	28		9.0 S	25.0 E	.0 E S	
Top of Up	permost Producir	ng Zone	1036 FS	SL 971 FWL		SWOW	28	9.0 S 25.0 E			S	
At Total D	epth		1036 FS	SL 971 FWL		SVOV	28		9.0 S	25.0 E		S
21. COUNT		INTAH		22. DISTANCE TO	NEAREST L	EAS LINE (Feet)	)	23. NUN	MBER OF ACRE	S IN DRILLIN 40	G UNIT	
				25. DISTANCE TO (Applied For Dril	ling of Com		OOL	<b>26. PROPOSED DEPTH</b> MD: 7000 TVD: 7000				
27. ELEVAT	ION - GROUND L	<b>EVEL</b> 5638		28. BOND NUMBE		ISPO7336		29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE White River 49-2382				ICABLE
				Hole, Ca	sing, and (	Cement Inform	ation					
String	Hole Size	Casing Size	Length	Weight		& Thread	Max Mud	Wt.	Cement	Sacks	Yield	
SURF	12.25	9.62	0 - 1000	40.0	N-8	30 LT&C	9.5		No Used Class G	483	1.17	
Prod	7.875	5.5	0 - 7000	15.5	J-5	5 LT&C	10.5		Class G	695	1.96	_
									Class G	185	1.35	14.0
					ATTACH	HMENTS						
	VERIFY	THE FOLLOWING	ARE ATTAC	HED IN ACCOR	DANCE WI	TH THE UTAH	OIL AND GAS	CONS	ERVATION GE	NERAL RU	ILES	
<b>⊯</b> WEI	L PLAT OR MAP F	PREPARED BY LICEN	SED SURVEYO	R OR ENGINEER		<b>✓</b> COMPLE	ETE DRILLING F	PLAN				
AFFI	DAVIT OF STATUS	S OF SURFACE OWN	ER AGREEMEN	T (IF FEE SURFAC	E)	FORM 5.	IF OPERATOR	IS OTHER	R THAN THE LEA	ASE OWNER		
DIRE	CTIONAL SURVE	Y PLAN (IF DIRECTIO	ONALLY OR HO	RIZONTALLY DRI	LLED)	TOPOGR	APHICAL MAP					
NAME Tho	mas Hauptman			TITLE President			PHONE 40	06 259-8	480			
SIGNATUR	E			<b>DATE</b> 11/20/20	14		EMAIL ton	n@tmhau	ıptman.com			
API NUMBE	ER ASSIGNED 430	47549840000		APPROV	/AL							

### KGH OPERATING COMPANY, LLC

### **DRILLING PROGRAM**

(Amended 5-11-2015)

(Attachment to Utah Department of Natural Resources, Division of Oil, Gas and Mining Form 3 APD)

KGH Operating Company, LLC State 28-13 SWSW Section 28, T9S, R25E

Uintah County, Utah Surface Location: 1036' FSL, 971' FWL

Bottom hole Location: Same, Vertical Hole

State SITLA Lease: 52862

This Application to Drill (APD) is filed in accordance with Utah Department of Natural Resources, Division of Oil, Gas and Mining (UDOGM). The following DNLLING PROGRAM describes the required items listed on the Utah UDOGM APD Checklist, obtained from the Utah UDOGM website on November 4, 2014.

ITEM 1. UDOGM Form 3

attached

ITEM 2. Contact Information and phone number of surface owner:

State of Utah School and Institutional Trust Lands Administration (SITLA)

675 East 500 South #500

Salt Lake City, Utah

801-538-5100

Contact: LaVonne Garrison

ITFM 3. Location Plat

Attached

ITEM 4. Water Rights Approval

Water will be obtained from the White River under the Permit Number 49-2382. Copy of permit attached.

### ITEM 5. Estimated Geological Markers (Depth)

Green River	Surface	
Wasatch	1492	
Mesaverde	2516	
Sego	3570	
Castlegate	5418	Possible water and gas
Mancos	5623	Possible oil and gas
Mancos B	6230	Possible oil and gas
Prairie Canyon (Target Zone)	6532	Possible oil and gas
Proposed TD	7000	

### ITEM 6. Estimated top of anticipated water, oil and gas zones and plans for their protection.

Green River	Surface	
Wasatch	1492	Possible water, oil and gas
Mesaverde	2516	Possible water, oil and gas
Castlegate	3570	Possible water and gas
Mancos	5623	Possible oil and gas
Mancos B	6230	Possible oil and gas
Prairie Canyon (Target Zone)	6532	Possible oil and gas

All zones that have shows of gas and or oil will be protected by the drilling mud which will prevent invasion of mud into the formations as well as control the flow of gas and/or gil into the well bore.

Sufficient mud materials to maintain mud properties, control lost circulation and contain pressure "kicks" will be available at the well site.

Should production casing be run, those zones having shows of oil and/or gas will be protected by production casing cement.

### ITEM 7. Plan for pressure control (BOPE), including schematic and casing test.

BOP and Manifold schematic attached.

BOP's and the choke manifold will be installed and pressure tested prior to drilling out the surface casing shoe. The BOP will be checked daily and recorded in the drillers log. BOP's will be pressure tested every 30 days. Ram preventers and related pressure control equipment will be pressure tested to rated working pressure of the stack assembly if a test plug is used. If a test plug is not used, the stack assembly will be tested to the rated working pressure of the stack

assembly or 70% of the minimum internal yield of the casing, whichever is less. All casing strings will be pressure tested to 0.22 psi/ft or 1500 psi, whichever is greater, not to exceed 70% of internal yield.

Auxiliary Equipment will include:

Upper kelly cock (lower kelly cock will be available on rig floor)
Inside BOP or stab-in valve (available on rig floor)
Mud monitoring will be made with Pason monitoring equipment as well as visually monitored.

During the drilling of the surface casing hole, a 13-3/ conductor will be set at 40 feet, cemented to surface and after waiting at least 8 hours cement, a 13-3/8 Annular will be nippled up over a drilling spool with a 3-inch by 3,000 found for the manifold and a 2-inch by 5,000 pound flange for the kill side.

ITEM 8. Description of mud system, including mud weights

Surface to 1000 ft 1000 ft to TD (700) Soud mud as conditions dictate

Low solids non-dispersed as conditions dictate

Mud weight 8.6-10.5 ppg
Viscosity 38-55 sec
Water Loss 10cc or less
Ph 8.5 – 6.5

ITEM 9. Plans for testing and logging.

There are no cores or DST's planned for this hole.

The open hole logging program will include:

Dual Induction with Gamma from TD to Surface

Compensated Neutron Density from TD to Surface Casing Shoe

Cement Bond Log (if production casing is run) from TD to Surface

A qualified Mud Logger with gas detection equipment will be on

location from surface casing drill out to TD.

ITEM 10. Expected bottom hole pressure and any anticipated abnormal pressures, temperatures, or hazards and plans for mitigation.

No abnormal pressure or temperature zones are expected.

Sufficient mud materials to maintain mud properties, control lost circulation and contain pressure "kicks" will be available at the well site.

### H2S is not anticipated Estimated bottom hole pressure less than 2900 psi

### ITEM 11. Casing Design (Size, type, and weight)

Depth	Casing	Hole	Casing	Casing	Cement **
		Diameter	Diameter	Grade and	
				Weight	
0 - 1000	Surface	12-1/4	9-5/8	N-80, 40#	To surface with
				Collapse	+/- 483 sx Class G
				3090 psi	
1000 – TD *	Production	7-7/8	5-1/2	J-55,	To Surface with
				15.5#***	

\*If deemed a productive well

\*\* Refer to Cement Proposal Item 12

\*\*\* 5-1/2 Casing specifications: Collapse pressure: 4,040 psi

Collar OD: 5.575 in

ITEM 12. Cement design type, weight (Amended 5-8-2015)

	Cement Type	Lead(sx, wt, yield)	Tail (sx, wt, yield)	Tail Compressive
				Strength (72 hrs)
Surface	Class G		483, 15.8, 1.174	3000+ psi
Production	Class &	695, 12.5, 1.962	185, 14.0, 1.35	3000+ psi

ITEM 13. Design of horizontal or directional including directional

Not Applicable, vertical hole

ITEM 14. Designation of Agent

Attached

ITEM 15. Bond

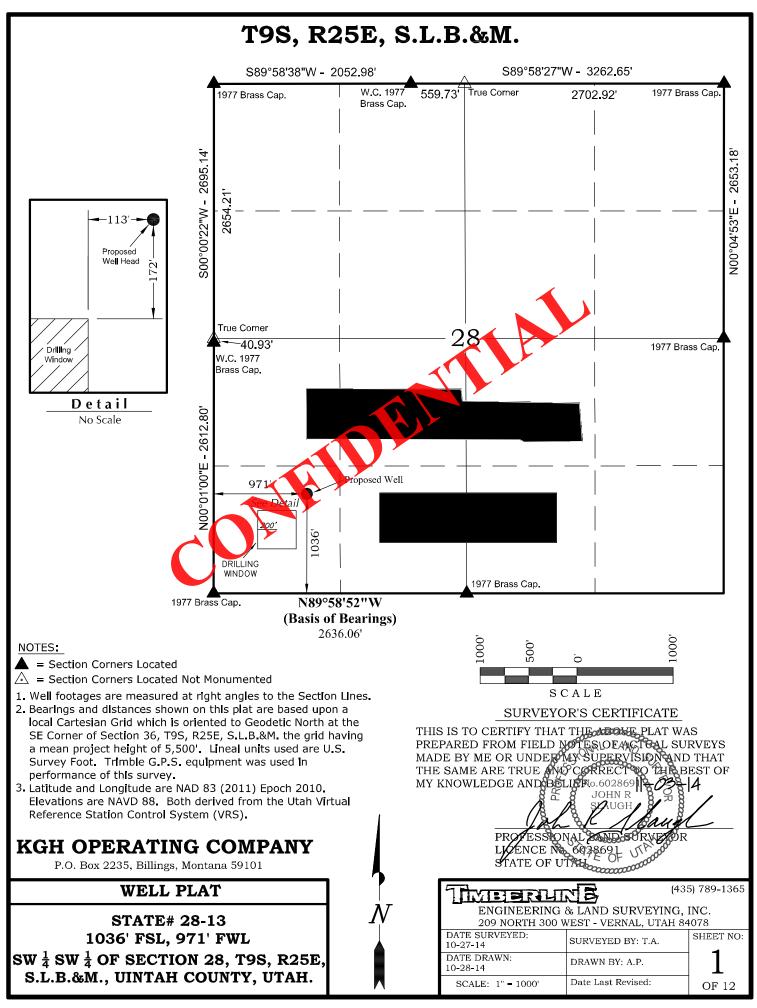
See APD Application

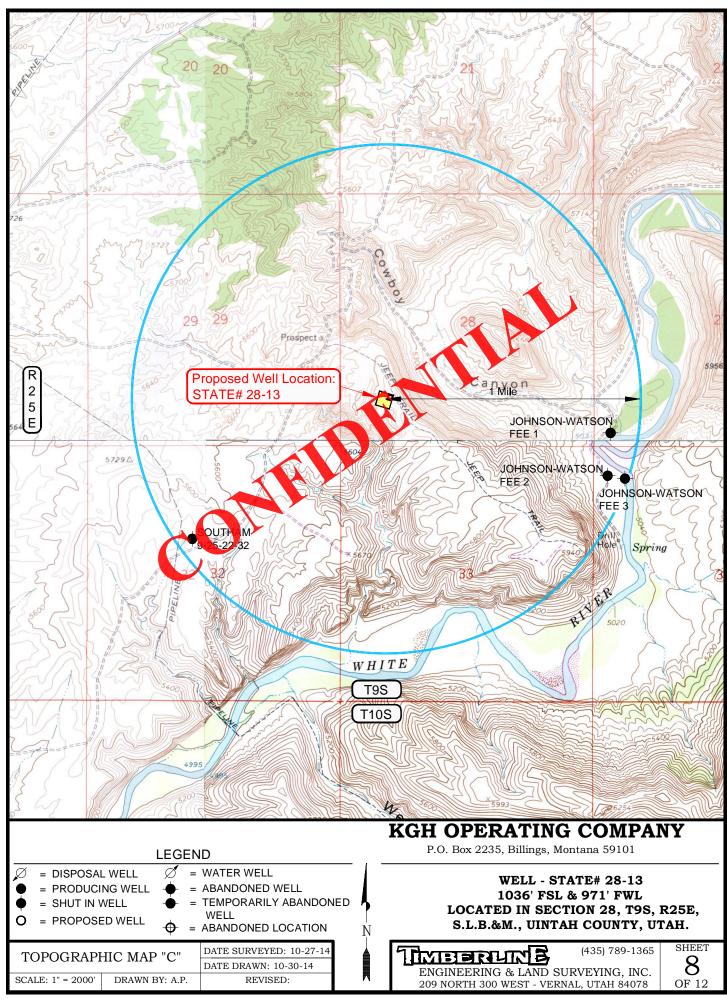
ITEM 16. Affidavit of Surface Agreement

Provided by Lease

ITEM 17. Exception Location Request

**Attached** 





## STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

# **DESIGNATION OF AGENT OR OPERATOR**

The undersigned is, on record, the holder of oil and gas lease

LEASE NAME: Bonanza Block

LEASE NUMBER: See attached Exhibit "A"

and hereby designates

NAME: Hohn Engineering, PLLC

200 Suite ż Ave 1st 2708 ADDRESS:

59101 E Billings 휭 as his (check one) agent \(\tilde{\beta}\) l operator \(\tilde{\alpha}\), with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the Division Director or Authorized Agent may serve written or oral instructions in securing compliance with the Oil and Gas Conservation General Rules and Procedural Rules of the Board of Oil, Gas and Mining of the State of Utah with respect to:

(Describe acreage to which this designation is applicable. Identify each oil and gas well by API number and name. Attach additional pages needed.) attached Exhibit See

responsibility for compliance with the terms of the Board of Oil, Gas and Mining of the not constitute an assignment of any interest in It is understood that this designation of agent/operator does not relieve the lessect of the lease and the Oil and Gas Conservation General Rules and Procedural Rules State of Utah. It is also understood that this designation of agent or operator does in

In case of default on the part of the designated agent/operator, the lessee will make full and compt compliance with all rules, lease terms or orders of the Board of Oil, Gas and Mining of the State of Utah or its authorized representative.

The lessee agrees to promptly notify the Division Director or Authorized Agent of any change

In this designation.

Effective Date of Designation: 7-14-2014

BY: (Name) Thomas M. Hauptman

(Signature) Les MM LAM

President

(Title)

(Phone) 406-259-8480

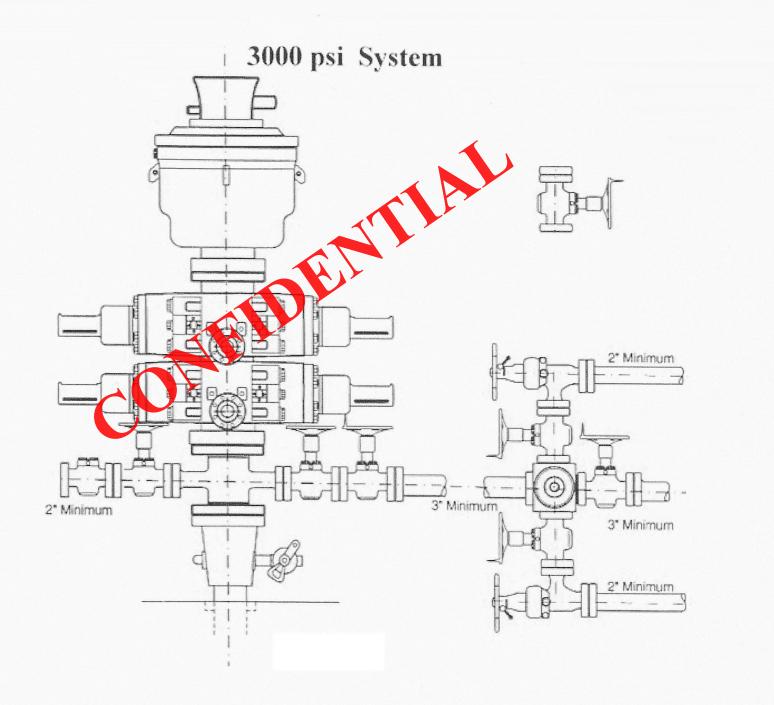
OF: (Company) KGH Operating Company (Address) PO Box 2235

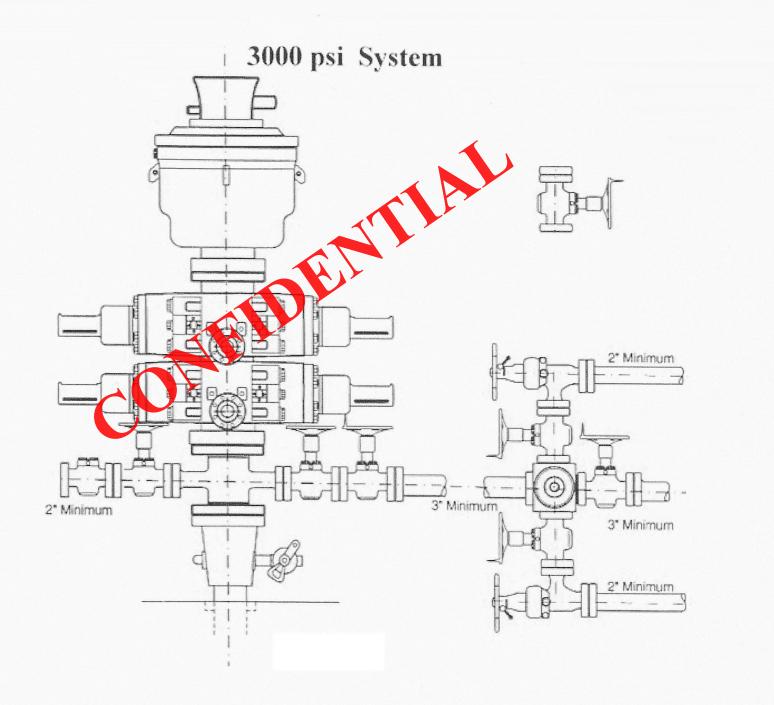
city Billings state MT zip 59103

(2/2000)

### EXHIBIT "A"

ST	COUNTY	LSE	PROSPECT	TWP	RGE	DESC.	LESSOR	LESSEE	GROSS	NET
	.	Ю			<u> </u>			<b></b>		
UT	Uintah	512	Bonanza Block	98	24E	24: Lots 1,4,5,6,7,10, N/SE  aka E/2SW, S/2SE  25: Lots 1,2,3,4,5,6,7,8,9,10,11,12,  NWXSWX, S/S/X  aka All less mining claims	State of Utah ML 52851	T-K Production Co.	787.01	787.03
UT	Uintah	512	Bonanza Block	98	24E	36: NY, SWYSWY, NYSEX	State of Utah ML 52852	T-K Production Co.	440	440
UT	Uintah		Bonanza Block	98	25E	8: Lots 1,3, SWNW, NXSWW, SEKSWW, SEX (lots aka SWSW) 9: SXNW, SX	State of Utah ML 52853	T-K Production Co.	954.48	954.48
UT	Uintah	515	Bonanza Block	98	25E	10: S%N%, S% 11: S%N%, S%	State of Utah ML 52854	T-K Production Co.	960	960
UT	Uintah	516	Bonanza Block	9\$	25E	12: Lots 2,3,4, SWXNWX, WXSWX (lots aka SENW, E/2SW) 13: Lots 1,2, WXNWX (lots aka EXNW)	State of Utah ML 52855	T-K Production Co.	345.38	345.38
UT	Uintah	517	Bonanza Block	95	25E	14: N½ 15: N½	State of Utah ML 52856	T-K Production Co.	640	640
UT	Uintah	518	Bonanza Block	95	25E	16: Lots 1,2,3,4,5,6,7, NEX, N%NWX, SEKNWX, SWXSWX, NEXSEX (All)	State of Utah ML 52857	T-K Production Co.	599.8	599,8
UT	Uintah	519	Bonanza Block	95	25E	17: Lots 1,3,4,5,6,7, NEWNEW, SWXNWW, SW (lots aka part of W/2NE, N/2SENE, N/2NW, SENW)	State of Utah 101 52258	J-K Production Co.	605.27	605.27
JT	Ulntah	520	Bonanza Block	98	25E	19: 5½ 20: All	State of Utah ML 52859	T-K Production Co.	960	960
JT	Uintah	521	Волапza Block	98	25E	21: Lot 1, NWXNEX, SXNEX, W%, SE% (All less mining claims)	State of Utah ML 52860	T-K Production Co.	638.59	638.59
JŤ	Ulntah	522	Bonanza Block	95	25E	22: Lots 2,3, SWXNWX (lots aka part of S/2NWNW, SENW) 28: SX	State of Utah ML 52861	T-K Production Co.	418.07	418.07
л	Uintah	523	Bonanza Block	98	256	29: Lots 1,2,3,4, NX, NEXSWX, SEX (Lots part of W/2SW, SESW less mining claims)	State of Utah ML 52862	T-K Production Co.	617.92	617.92
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JΤ	Ulntah	525	Bonanza Block	98	25E	31: Lots 1, 2, 3, SWXNEX, NWX, SX (Lots aka part of N/2NE, SENE)	State of Utah ML 52864	T-K Production Co.	622.17	622,17
JT	Uintah	526	Bonanza Block	98	25E	32: Lots 1,2,3,4,5,6,7,8,9,10, SEИNWИ, SWИ, NИSEИ (All less mining claims)	State of Utah ML 52865	T-K Production Co.	582.34	582.34
JΤ	Uintah	527	Bonanza Block	98	25E	33: Lot 1, NWXNWX (Lot aka part of SWXNWX)	State of Utah ML 52866	T-K Production Co.	79	79







### HOHN ENGINEERING, PLLC

2708 1st Avenue North, Suite 200
Billings, MT 59101
406-655-3381 Fax 406-655-3383 Email: hohneng@hohneng.com

December 15, 2014

State of Utah Division of Oil, Gas and Mining 1594 West Temple, Suite 1210

RE:

Oil and Gas Conservation General Rules

R6449-3-3 Exception to Locating and Sitting of Wells

**KGH Operating Company** 

State 28-13

SWSW Sec 28, T9S, R25E Uintah County, Utah

KGH Operating Company is proposing to drill an exploratory well in the SWSW Sec 28, T9S, R25E, Uintah County, Utah. The well is located on State of Utah SILA Jands.

As shown on the attached staking plat the State 28-13 well is a vertical well in which is located outside of the standard well spacing (R649-3-3-1). KGH is requesting an exemption to the spacing requirement per regulation R649-3-3 since KGH was unable to be located the proposed well within the allowed spacing "window" due to top graphic constraints. To maintain orderly 40-acre spacing and efficient well drainage the well is proposed to be located approximately 488 feet to the northeast of the standard SESE 40-acre location. KGH is the only operator within the 460' radius of State 28-13 location in Section 28.

KGH is requesting the approval of this exception location as proposed. If additional information is required, please contact me at (406) 655-3381.

Shones Kolon

Thomas K Hohn

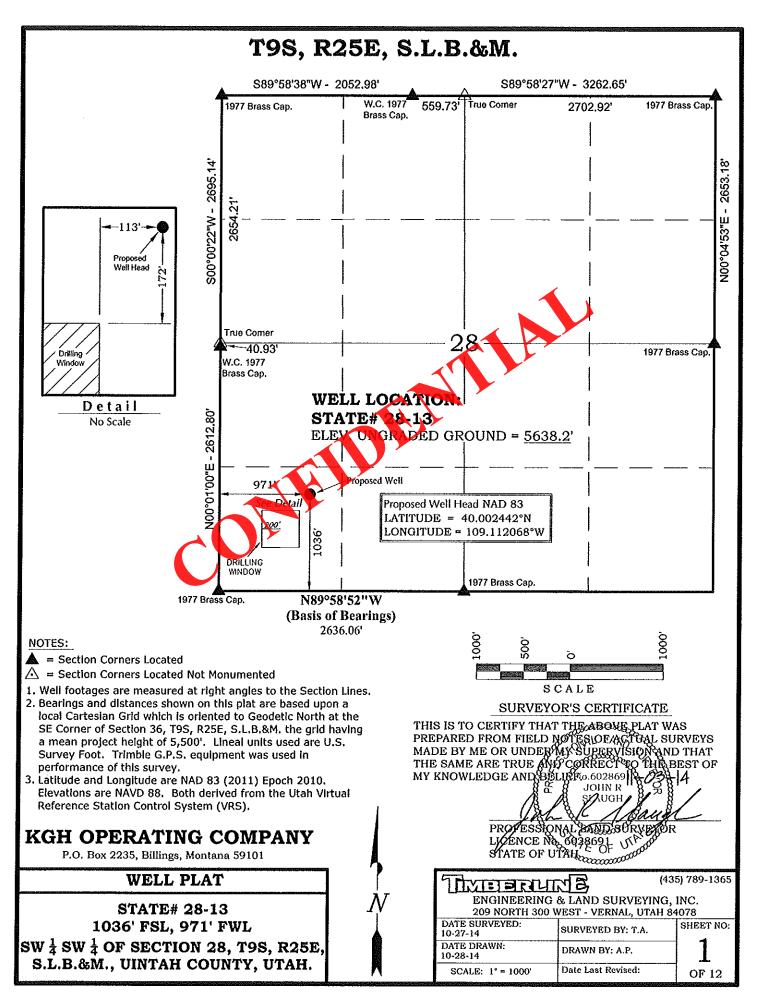
Hohn Engineering, PLLC

Designated Agent for KGH Operating Company

Attachments:

Location Plat KGH State 28-13

Received: December 16, 2014



## STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

# **DESIGNATION OF AGENT OR OPERATOR**

The undersigned is, on record, the holder of oil and gas lease

Block Bonanza LEASE NAME: ...∀ Exhibit attached See LEASE NUMBER:

and hereby designates

PLLC Engineering, Hohn NAME

200 Suite ż Ave 1st 2708 ADDRESS:

59101 E Billings 휭 as his (check one) agent \(\tilde{\beta}\) l operator \(\tilde{\alpha}\), with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the Division Director or Authorized Agent may serve written or oral instructions in securing compliance with the Oil and Gas Conservation General Rules and Procedural Rules of the Board of Oil, Gas and Mining of the State of Utah with respect to:

(Describe acreage to which this designation is applicable. Identify each oil and gas well by API number and name. Attach additional pages needed.) attached Exhibit See

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In case of default on the part of the designated agent/operator, the lessee will make full and compt compliance with all rules, lease terms or orders of the Board of Oil, Gas and Mining of the State of Utah or its authorized representative.

The lessee agrees to promptly notify the Division Director or Authorized Agent of any change

In this designation.

Effective Date of Designation:

Hauptman Σ. Thomas (Name) ΒΥ:

(Signature)

President

(Title)

406-259-8480 (Phone)

Company Operating 2235 KGH 2 (Company) <u>e</u>:

(Address)

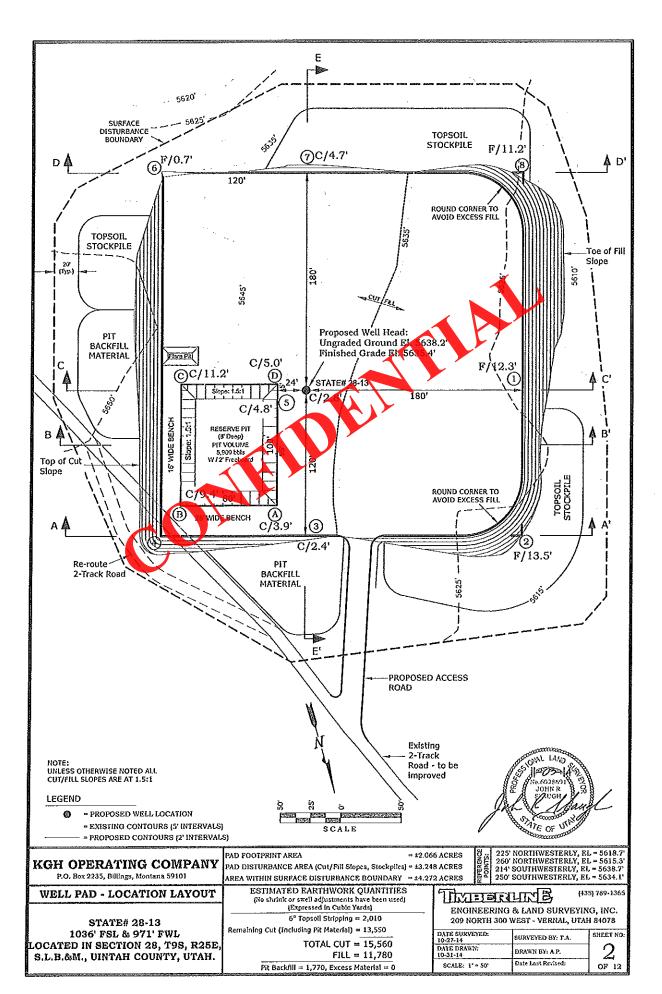
59103 Billings Ċį

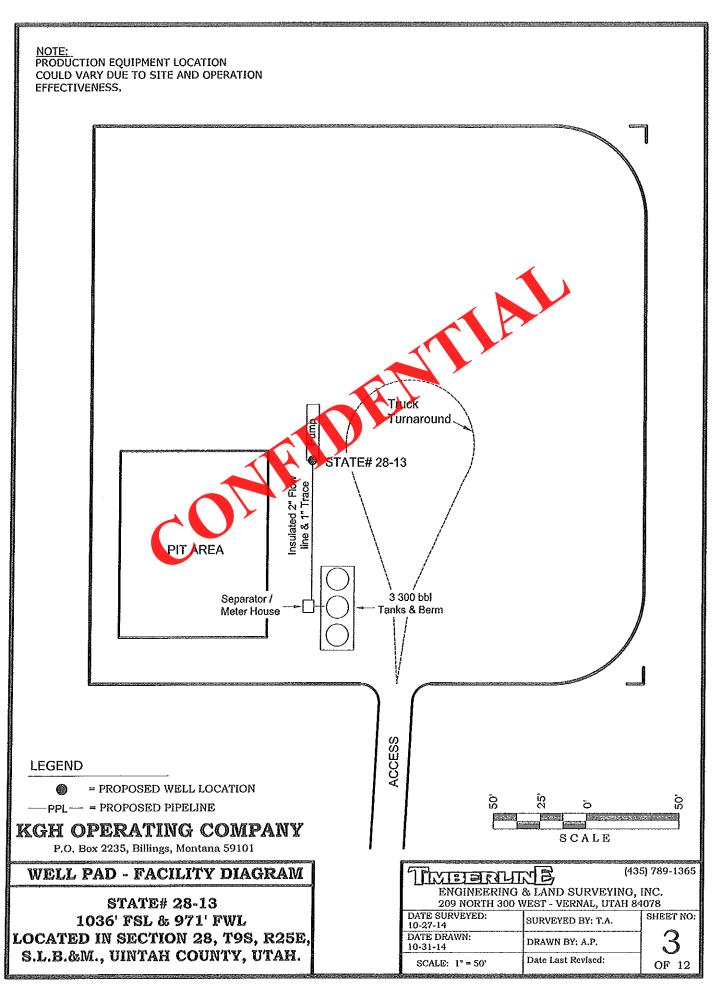
state MT

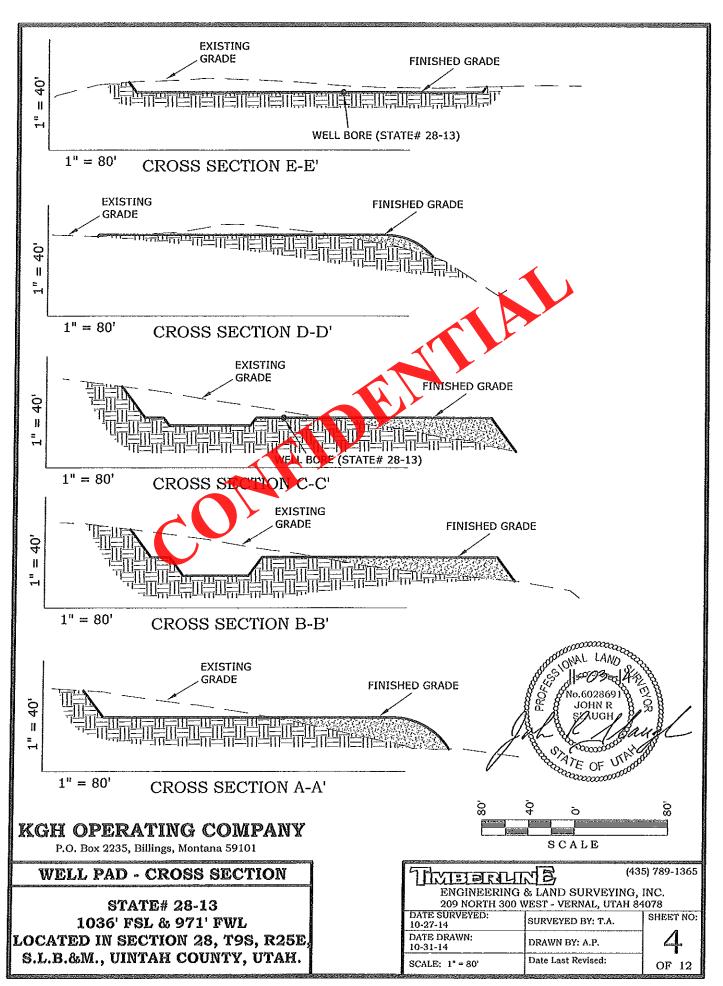
(5/2000)

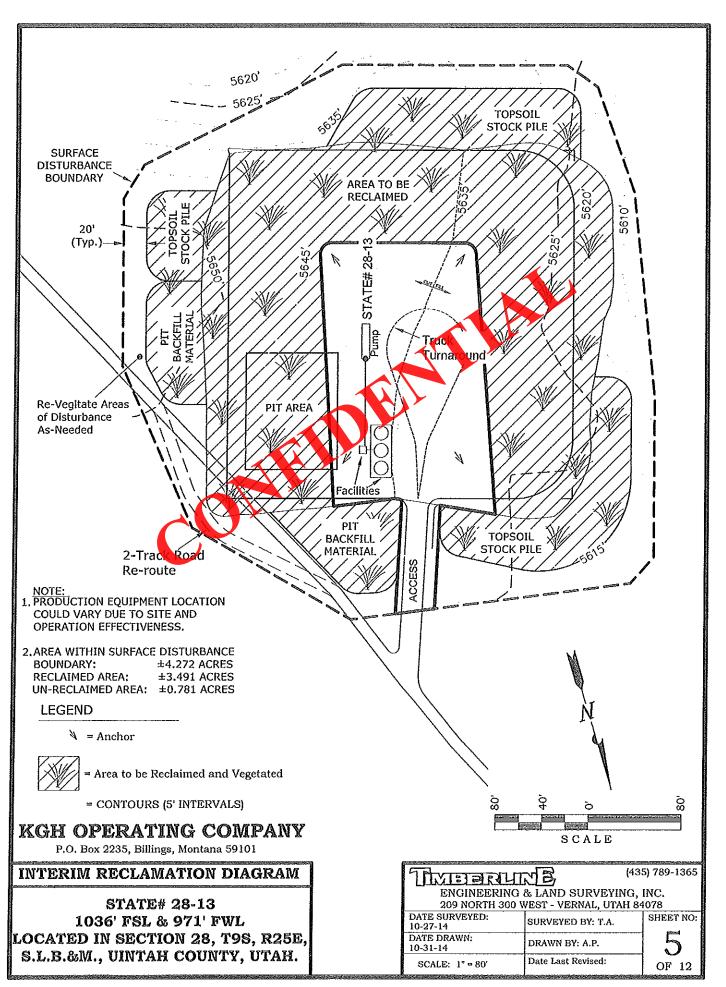
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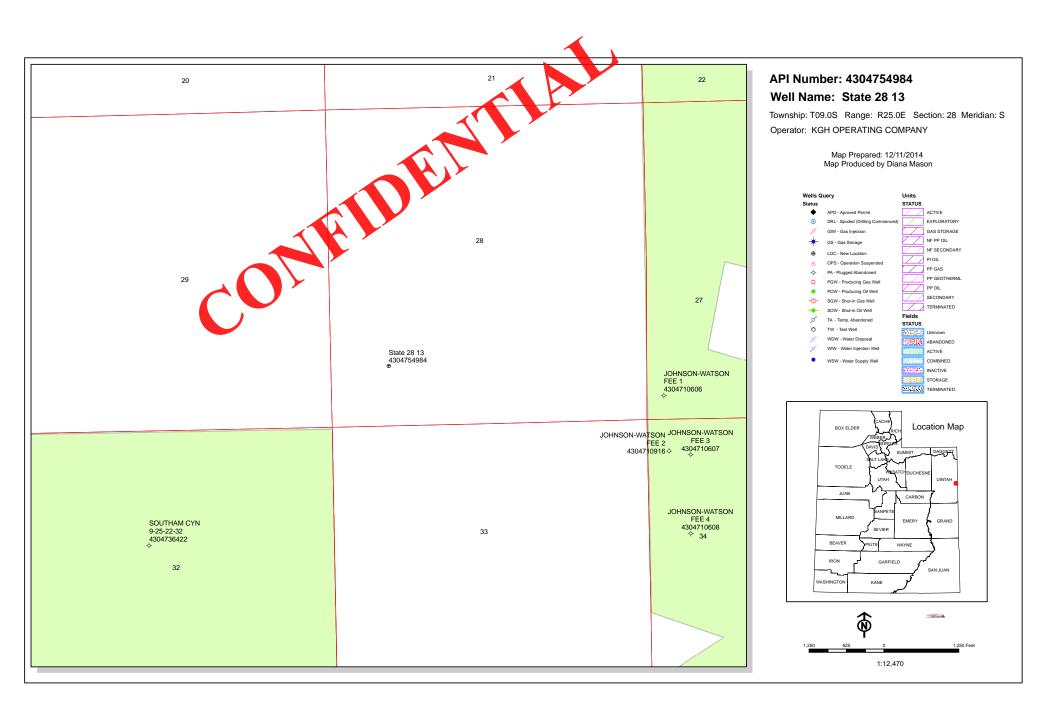
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JT	Ulntah	520	Bonanza Block	98	25E	19: 5½ 20: All	State of Utah ML 52859	T-K Production Co.	960	960
JT	Uintah	521	Волапza Block	98	25E	21: Lot 1, NWXNEX, SXNEX, W%, SE% (All less mining claims)	State of Utah ML 52860	T-K Production Co.	638.59	638.59
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### Diana Mason < dianawhitney@utah.gov>

### **KGH Approval**

Jeff Conley < jconley@utah.gov>

Tue, Jan 13, 2015 at 11:18 AM

Reply-To: jconley@utah.gov

To: Diana Mason <a href="mailto:>dianawhitney@utah.gov">dianawhitney@utah.gov</a>, Bradley Hill <a href="mailto:bradhill@utah.gov">bradley Hill <a href="mailto:bradhill@utah.

Cc: tom@tmhauptman.com

Hello,

, ieo rec The following well has been approved by SITLA for both arch and paleo with the paleo requirement that a paleo monitor be on site for ground-disturbing activities:

(4304754984) State 28 13

Thanks,

Jeff Conley SITLA Resource Specialist jconley@utah.gov 801-538-5157



January 13, 2015

RECEIVED

JAN 16 2015

State of Utah School & Institutional **Trust Lands Administration** 675 E 500 S, Suite 500 Salt Lake City UT 84102-2818

DIV. OF OIL, GAS & MINING

Re:

ML 53037 - Oil, Gas & Hydrocarbon

ML 90007 OBA - Oil & Gas Exploration & Development Agreement

Dear Mr. Faddies,

Enefit American Oil ("EAO") appreciates the letter from SITLA leted Ja huary 5, 2015, notifying us of the Oil, Gas & Hydrocarbon lease (ML53037 dated 12/22/2014) manted to T-K Production Company ("TK").

In our research of other Oil, Gas & Hydrocarbon lesses granted to T-K Production Company, we came across lease ML90007 OBA. According to the M. Gas Exploration & Development Agreement dated April 1, 2014 between SITLA ent TK, provision 4.4B "Other Mineral Leases", requires:

"Prior to conducting any surface disturbing activities, the Company must enter into a written agreement with existing leasehold owners so that all parties may exercise rights granted to them in other mineral leases. Acopy of the agreement will be provided to TLA for its files."

EAO would like to formally notify SITLA that EAO is an "existing leaseholder" on a portion of leaseholds included under ML 90007 OBA (see the EAO property description in the enclosures). EAO and TK do not have a "written agreement" for a portion of the associated leases, specifically T10S R24E Sec. 1, for which both EAO and TK hold a lease.

Although EAO and TK have entered into a Cooperative Development Agreement regarding potential development of both the oil shale and oil and gas resource on nearby leases (Cooperative Development Agreement dated June 25, 2014), T10S R24E Section 1 is not covered by this agreement.

In addition to no agreement being in place with TK on this portion of the Bonanza block, EAO has already raised concerns to SITLA and DOGM regarding TK's failure to comply with the terms of the existing Cooperative Development Agreement covering other adjacent leases. For reference, copies of our correspondence are enclosed (12/9/2014 Letter to DOGM, cc to SITLA; 12/10/2014 Email from Lavonne Garrison to T-K re EAO's letter).

> **ENEFIT AMERICAN OIL** 307 W 200 S, Suite 4005

Salt Lake City UT 84101 www.enefitutah.com Tel 801-363-0206 USA



We kindly request that SITLA ensure that no surface disturbing activities take place on T10S R24E Section1 until TK and EAO have come to a mutually acceptable written agreement protecting both parties rights, and that agreement has been provided to SITLA, as required by the "Oil & Gas Exploration & Development Agreement".

Rikki Hrenko-Browning

**CEO** 

**Enefit American Oil** 

Cc:

Becky Pritchett, SITLA

Brad Hill, Division of Oil, Gas & Mining

Received: January 20, 2015

Enefit American Oil's existing STILA Oil Shale Leases:

- ML 49105 T9SR25E SLB&M, Section 28 S1/2 and Section 33 Lots 1,2,3,4,5 NE1/4, N1/2NW1/4, SE1/4NW1/4
- ML 49106 T10S, R24E, SBL&M, Section 1: Lots 1,2,3,4,5, SE1/2NE1/4, SE1/4NW1/4, N1/2S1/2, N1/2SW1/4SW1/4, SW1/4SW1/4SW1/4, W1/2SE1/4SW1/4SW1/4, S1/2SE1/4, SE1/4SW1/4
- ML 49104 T9S, R25E, SLB&M, Section 19: S1/2., Section 30: Lots 1, 2, 3, 4, 5, 6, 7, 8, 9,10, 11, 12, 13, 14, 15,N1/2NE1/4,SE1/4NE1/4, Section 31: Lots 1,2,3, SW1/4NE1/4,NW1/4,S1/2
- ML 48163 T9S, R25E, SLB&M, Section 32: lots 1,2,3,4,5,6,7,8,9,10, SE1/4NW1/4,SW1/4,N1/2SE1/4



Received: January 20, 2015



December 9, 2014

Brad Hill, Oil and Gas Permitting Manager Department of Natural Resources, Division of Oil, Gas and Mining State of Utah P.O. Box 145801 Salt Lake City, UT 84114-5801

Re: Application for Permission to Drill, Section 28, Township 9 South, Range 25 East

Dear Sir or Madame:

Enefit American Oil ("EAO") is an oil shale (even pment company headquartered in Salt Lake City, holding an oil shale resource portfolio consisting of private, state, and Federal lands located in Uintah County, Lian. EAO understands the State of Utah. Department of Natural Resources, Division of Oil, Gas and Mining ("DOGM") has received an Application for Permission to Diff ("APD") in the southeast quarter of the southeast quarter of Section 28, Township 9 South, Range 25 East, Salt Lake Base and Meridian. The APD was submitted to DOGM by KGH Production Company and has been issued application number 434754984. EAO holds oil shale lease number MLA49105, issued by the Itan School and Institutional Trust Lands Administration ("SITLA"), for that same parcel, which has been designated as a "Multiple Mineral Development Ala " by DOGM and SITLA pursuant to Sections R649-3-27 and R850-22-1000 (espectively) of the Utah Administrative Code ("UAC"). Additionally, this location has been assigned status as a "Designated Oil Shale Area" pursuant to Section R649-3-31 of the UAC, requiring specific measures for oil and gas exploration and production wells.

EAO has entered into a Cooperative Development Agreement ("the Agreement") with TK Production Company, dated June 19, 2014, to aid in guiding both oil and gas and oil shale development in this Multiple Mineral Development Area, as required by the UAC. Section 7.2(b) of the Agreement specifically states:

"As Plans of Operation are developed or modified for the Subject Lands, or as required by a Governing Agency or agreed to by the Parties, TK shall submit to EAO a plan of projected operations contemplated for the period. Plans for operation shall show all existing drilled, completed, shut-in, and plugged and abandoned wells, and proposed wells to be drilled. TK agrees to accommodate Mine Plans and Mining Operations so far as reasonably practicable" (emphasis added).

> **ENEFIT AMERICAN OIL** 307 W 200 S, Suite 4005 Salt Lake City UT 84101 www.enefitutah.com

> > USA

Tel 801-363-0206



The referenced APD is within the "subject lands," as described in Exhibit A of the Agreement. To date, EAO has received no such plans of operation or notification regarding drilling or the referenced APD from TK Production Company or any assignees.

As such, EAO requests DOGM enforce and require the full measures of cooperation, coordination and protection afforded to Multiple Mineral Development and Designated Oil Shale Areas, as well as party-to-party cooperation agreements governing the same. EAO also requests DOGM notify EAO of any and all upcoming actions, hearings, etc. relating to this APD.

Please feel free to contact me at 801.363.0206 or Ryan. Deteo@enefit.com if you are in need of any additional information.

Very truly yours,

Ryan Clerico

Head of Development and Environment

Enefit American Oil

Cc: Tom Faddies, Assistant Director Hard Rock and Industrial Minerals, Utah School and Institutional Trust Lands Administration, 675 East 500 South, Suite 500, Salt Lake City, UT 84102

From:

Lavonne Garrison <a href="mailto:lavonnegarrison@utah.gov">lavonnegarrison@utah.gov</a>

To:

Tom Hauptman <tom@tmhauptman.com>

Cc:

Tom Faddies <tomfaddies@utah.gov>, ryan.clerico@enefit.com

Date:

12/10/2014 01:59 PM

Subject:

Bonanza Block

Attached is a letter our Mining Group received from Enefit. Please review and contact Enefit to discuss your drillsite as required by the Multiple Mineral Development Agreement to which both companies are subject. If there are questions, please contact me as set out below. This needs to be done before there is any surface disturbing activities on the drillsite.

LaVonne J. Garrison Assistant Director/Oil and Gas Utah Trust Lands Administration

lavonnegarrison@utah.gov

(801) 538-5197 - office

(801) 201-8634 - cellphone



Dayne Doucet <daynedoucet@utah.gov>

### Fw: Notification regarding T-K/KGH and Enefit American Oil cooperating agreement

1 message

Rvan Clerico < Rvan. Clerico @enefitamericanoil.com > To: daynedoucet@utah.gov

Mon, Mar 2, 2015 at 5:01 PM

Hello Dayne,

Nice speaking with you, thank you for the call. As discussed, please see below for the email sent to John Rogers and Helen last week. Please feel free to give me a ring if you have any other questions.

Kind regards,

Ryan

Ryan Clerico Head of Development and Environment

**Enefit American Oil** Office: +1 801 363 0206 Mobile: +1 801 703 6983 Skype: Ryan.Clerico Ryan.Clerico@enefit.com

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---- Forwarded by Ryan Clerico/Energia on 03/02/2015 04:59 PM ----

From: Ryan Clerico/Energia

To: johnblake@utah.gov, "Lavonne Garrison (lavonnegarrison@utah.gov)" <lavonnegarrison@utah.gov>, johnrogers@utah.gov, hmacdonald@utah.gov

"Tom Hauptman (tom@tmhauptman.com)" <tom@tmhauptman.com>, "Jeff Wingerter" <jwingerter@hohneng.com>, Rikki Lauren

Hrenko-Browning/Energia@Energia Date: 02/23/2015 09:51 AM

Subject: Notification regarding T-K/KGH and Enefit American Oil cooperating agreement

All,

This notice is being sent in regards to a Cooperative Development Agreement between T-K Production Company/KGH Operating Company and Enefit American Oil, for a multiple mineral development lease area on SITLA land in the southeastern Uinta Basin. All activities and commitments under the CDA are up to date, and EAO has no objections to T-K/KGH's currently-proposed seismic and drilling plans, as applied for with DOGM and SITLA in December 2014.

Please feel free to contact me with any questions or for any additional information from EAO.

Regards,

https://mail.google.com/mail/u/0/?ui=2&ik=bcaf1d5441&view=pt&q=ryan%20clerico&qs=true&search=query&th=14bdcefecb606e9c&siml=14bdcefecb606e9c Received: May 27, 2015 Ryan Clerico Head of Development and Environment Enefit American Oil

Office: +1 801 363 0206 Mobile: +1 801 703 6983 Skype: Ryan.Clerico Ryan.Clerico@enefit.com

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### COOPERATIVE AGREEMENT FOR CONCURRENT

### MINING AND OIL AND GAS OPERATIONS

THIS AGREEMENT is entered into this \_\_\_\_\_\_day of May, 2014, by and between T-K Production Company ("TK"), PO Box 2235, Billings, Montana 59103, and Ambre Energy North America, Inc., 170 South Main Street, Suite 700, Salt Lake City, Utah 84101 ("AMBRE"), (individually a "Party" and collectively the "Parties"), who in consideration of mutual promises agree as follows:

### ARTICLE 1. PARTIES AND OPERATIONS

- 1.1 TK is a Montana corporation licensed to do business in Utah. PK owns and operates Oil, Gas and Associated Hydrocarbons Leases issued by the Utah School and Institutional Trust Lands Administration ("TLA") and conventional oil and gas wells on the Subject Lands (as defined in this Agreement), and will be conducting future Oil and Gas Operations thereon.
- 1.2 AMBRE is a Utah corporation icensed to do business in Utah. AMBRE owns Oil Shale Leases issued by TLA and will be developing Oil Shale deposits on the Subject Lands, and will be conducting future Mining Operations thereon.

### ARTICLE 2. PURPOSES

- 2.1 Coordinated Operations. Applicable laws and Lease terms require Multiple Use of the Subject Lands and expressly provide for the concurrent or simultaneous exploration and extraction of the Respective Mineral Resources from the Subject Lands. The Parties recognize and understand that occasional operational conflicts are inevitable. The Parties therefore agree that cooperation and coordination of their Concurrent Development Operations and orderly resolution of conflicts is essential to the commercial viability of their respective Leases and the maximum ultimate recovery of their Respective Mineral Resources in an expeditious and economical manner consistent with principles of Multiple Use and this Agreement. The primary purposes of the Agreement are to: (a) address and protect the relative rights of the Parties in a cooperative manner; (b) protect the safety and health of all personnel; (c) protect the Respective Mineral Resources and other natural resources from damage, injury and waste; and (d) provide for Concurrent Development Operations.
- 2.2 **Maximum Ultimate Economic Recovery**. TK and AMBRE desire to protect their relative rights to develop their Leases and enjoy their Leaseholds and surface rights in a cooperative, coordinated and harmonious manner that will comply with applicable law

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Received: May 27, 2015

and result in the maximum ultimate economic recovery of their Respective Mineral Resources with minimum waste and conflicts.

- 2.3 **Protecting Personnel, Equipment, and Resources**. TK and AMBRE agree that a paramount consideration of the Parties while conducting Concurrent Development Operations is protecting life, limb, property and other natural resources from damage and injury while achieving the maximum ultimate economic recovery of their Respective Mineral Resources.
- 2.4 Protecting the Surface Estate. The Parties agree to conduct their operations in a manner that will minimize damage to surface resources consistent with their respective rights to use so much of the surface as reasonably necessary to explore for, mine and develop, remove and process their Respective Mineral Resources, recognizing that: (a) AMBRE's Mining Operations will involve surface and or underground mining of Oil Shale as well as onsite processing and disposal of the processed sand, thes, overburden and other waste rock; (b) the drilling of Directional Wells by TK can significantly increase the time and costs to successfully drill and complete each well, and in some cases the drilling of a replacement well at a different surface location to achieve the target objective.
- 2.5 Expectations of Parties. TK and AMERE, by entering into their respective Leases, contemplated present rights to explore for, produce, and remove their Respective Mineral Resources. The Parties agree to address and use their best efforts to coordinate activities and to timely address operational conflicts. The Parties also agree to make reasonable efforts to conduct their operations and resolve their disputes in a manner that will allow Concurrent Development Operations of the overlapping Leasehold estates. It is therefore agreed that among the possible alternative procedures for Concurrent Development Operations, deferring operations of one Party in favor of another should be a method of last resort and shall be utilized only upon agreement of the Parties or by a rule, order or directive of a Governing Agency.
- 2.6 Interference and Some Delays Anticipated. In the spirit of coordinated and cooperative Concurrent Development Operations, TK and AMBRE recognize that some operational interference, inaccessibility to, and delays involving portions of their Respective Mineral Resources may be inevitable. The Parties therefore confirm their understanding and agree that reasonable interference, and limited inaccessibility to and delays involving portions of their Respective Mineral Resources are the quid pro quo to facilitate present contemporaneous mineral development operations.

### ARTICLE 3. DEFINITIONS

3.1 **Critical Terms.** In addition to terms defined in other articles to this Agreement, the following definitions shall control this Agreement:

- (a) "Active Mining Operations" shall mean all projected operations for the extraction of Oil Shale within an approved Mine Plan over a two year period.
- (b) "Barren Areas" shall mean those areas contained within an Oil Shale Lease deemed or believed to be barren of Mineable Reserves, including areas in which the reserves have already been mined-out.
- (c) "Oil Shale" shall mean those substances generally known as "oil shale" regardless of color, which contain kerogen and other substances which are commonly found in what are commonly known as "oil shale deposits".
- (d) "Casing Program" shall mean the special requirements for casing a wellbore which are imposed by applicable law or this Agreement to protect mineral bearing formations of one Party form drilling, extraction, or production operations of another.
- (e) "Cement Bond Log" shall mean that log run to test the quality of the cement-tocasing bond around cemented casing of a well
- (f) "Concurrent Development Operations" shall mean the right of TK and the right of AMBRE to conduct mineral extraction operations and related activities in close proximity on the Subject Lands, and on overlapping Leases, at the same time.
- (g) "Deferred Operations" shall mean that circumstance when, either by agreement of the Parties or by direction of a Governing Agency, one of the Parties suspends and defers its operations in any particular area of the Subject Lands for a period not to exceed two (2) years in favor of the other Party's operations continuing on the same area of the Subject Lands.
- (h) "Development Well" shall mean a well drilled to a known producing formation in a previously discovered field, as distinguished from an Exploratory Well.
- (i) "Directional Well" shall mean a well in which the wellbore departs materially from the vertical.
- (j) "Drilling Island" shall mean that geographic area designated for the drilling of: (i) vertical wells from authorized surface locations; and (ii) one or more Directional Wells designated to bottom hole under lands for which no surface locations are available either by agreement of the Parties, or because of surface conditions, or surface occupancy prohibitions contained in lease or operating stipulations promulgated by the Governing Agency.
- (k) "Exchange Information" shall mean any and all documents; geologic, geographic, or other maps or plats; cross-sections; Mine Plans; plans of operations; surveys; correspondence; oral communications; consultant reports; technical reports: notices; permits; or update to any document required by this

- Agreement or by rules of the Governing Agency to be exchanged or to be submitted to the Committee; or any such document voluntarily exchanged or shared with a Party or the Committee.
- (1) "Exploration" shall mean in the oil shale context, those operations connected with locating the presence of economic deposits of oil shale andestablishing their nature, shape, depth, and grade, including geological surveys, grophysical prospecting, boreholes and trial pits, headings, drifts or tunnels. In the conventional oil and gas context, Exploration shall include aerial surveys, geophysical surveys, geological studies, core testing, and drilling of Exploratory Wells.
- (m) "Exploratory Well" shall mean an oil and gas well drilled greater than one (1) mile from a well producing in commercial quantities from a pool or common source or supply or a well drilled with the expectation of extending the known limits of an oil and gas field already partly developed.
- (n) "Governing Agency" shall mean TLA, the Unit Division of Oil, Gas and Mining or other state or federal administrative agencies having leasing, regulatory or operational jurisdiction over the conduct of the Parties. There may be circumstances when one or more state or federal agency may have concurrent jurisdiction over the leasing, regulatory or operations of the Parties.
- (o) "Leases" or 'Leaseholds' shall mean collectively those certain Oil, Gas and Associated Hydrocarbon Leases issued to TK by TLA and covering the Subject Lands and those certain Oil Shale Leases issued to AMBRE by TLA and covering the Subject Lands, and any extensions or renewals thereof (collectively referred to in this Agreement as the "Subject Leases").
- (p) "Mine Plan" shall mean the pre-design of the detailed layout, main roadways, and workings of a mine; including, but not limited to, the general description of the geologic conditions, mineral analysis, pit and overburden areas, reserve analysis, basic mining equipment, phases of mining, timeframe for development and such other data as might be required by the Governing Agency to be submitted for approval of Mining Operations. The Mine Plan shall be construed as the official document or permit initiating Mining Operations on the Subject Lands.
- (q) "Mining Operations" shall mean actual mining activities directed to the severance, removal, processing and transportation of Oil Shale ore and associated overburden and interburden. For purposes of this Agreement, Mining Operations shall not include Exploration.
- (r) "Multiple Use" shall mean, as between the Parties, conducting Mining Operations and Oil and Gas Operations in a harmonious and coordinated manner that takes into account: (i) the expectations of each Party to present enjoyment of

- its Leasehold estate; (ii) the relative economics of the Parties; and (iii) the relative mobilization, planning, and operational needs of each Party without undue impairment to the productivity and operations of the other.
- (s) "Oil and Gas Operations" shall mean all activities directed to the drilling for, production, processing, and transportation of oil and gas, including actual staging, dirt work and drilling operations. Oil and Gas Operations shall not include geophysical activities conducted prior to drilling for oil and gas.
- (t) "Protective Zone(s)" shall mean an area of the surface and the underlying Oil Shale ore left in place on the Subject Lands to serve as a Protective Zone for existing and future Oil and Gas Operations being conducted during Concurrent Development Operations.
- (u) "Respective Mineral Resources" shall mean (i) for TK, the recoverable oil, gas and associated hydrocarbons described and covered under its Leases; and (ii) for AMBRE, the recoverable oil shale minerals described and covered under its Leases.
- (v) "Subject Lands" shall mean those lands subject to this Agreement described in Exhibit "A" attached hereto, as may be amended from time to time, to include all lands within, and subject to, agreements, overlapping Leases, conveyances, or other instruments of cach larty affecting real property and stratigraphic geologic intervals within those lands
- (w) "Unreasonable Interference" shall mean interference in excess of that anticipated interference necessarily or appropriately interposed in the spirit of cooperative and coordinated development of the Respective Mineral Resources, it being understood that some delay resulting from the operations of the other Party may be both necessary and appropriate.
- (x) "Well Logs" shall mean those electrical, gamma ray-neutron, sonic, or appropriate logs run by TK to identify the stratigraphic bottoms and tops of geologic formations or stratigraphic intervals.
- 3.2 Undefined Terms to Conform and Applicable Law. All undefined terms used in this Agreement shall have the meaning customarily used in the mining and oil and gas industries unless the applicable term is defined by statute or regulation of a Governing Agency, in which case the term shall have the meaning prescribed by the Governing Agency.

### ARTICLE 4. LANDS AND LEASES SUBJECT TO AGREEMENT

- 4.1 Land Description. This Agreement shall apply to the operations of the parties in the Subject Lands described in Exhibit "A" attached hereto and incorporated herein by this reference, all of which are currently located in Uintah County, Utah.
- 4.2 **Lease Description**. The Subject Lands shall also include the Leases and lands covered by extensions or renewals of the Leases. The Leases shall hereinafter be collectively referred to as the "Subject Leases", which are also described and identified in Exhibit "A" to this Agreement and incorporated herein by reference.
- 4.3 Master Area Map. The Subject Lands and Subject Leases are depicted on the Master Area Map attached to this Agreement as Appendix 1 and imporporated herein by reference.

### ARTICLE 5 TECHNICAL COORDINATING COMMITTEE

- 5.1 Composition of Committee. The Parties agree to establish a Technical Coordinating Committee ("Committee") consisting of at least one representative of TK and at least one representative of AMBRE; and in the event a Governing Agency is required to be a signatory to any cooperative agreements affecting multiple mineral development conflicts, with the consent of the Parties, one representative of each such Governing Agency
- 5.2 Purpose of Committee and Venue. The purposes of the Committee shall be to assist the Parties in coordinating their activities and operations by: (a) providing a forum for discussion and to submit Exchange Information regarding the current and proposed operations of each Party; (b) gathering, studying, and disseminating technological data regarding new or improved mining, reclamation and transportation practices and procedures, and oil and gas drilling, completion, production, re-working, plugging and abandoning and transportation practices and procedures that bear on the protection of personnel and equipment and the preservation of all mineral resources subject to this Agreement; and (c) aiding in the resolution of conflicts which may arise between them. All Committee meetings shall be in Billings, Montana, or Salt Lake City, Utah, unless otherwise agreed by the Parties.
- 5.3 Master Area Map. In addition to the duties enumerated in this Article, the Committee shall maintain a "Master Area Map" covering the Subject Lands and Subject Leases and prepared by the Parties to which is posted at least once annually by May 1 of each calendar year, all modifications made since the last submittal, including, but not limited to: (a) boundaries of the Subject Lands and existing roads; (b) changes in and to the Subject Leases; (c) the location and size to scale of existing, planned and proposed Oil Shale development, including roads, pits, overburden storage areas, processing plants,

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**Received: May 27, 2015** 

workings, facilities and related operations; (d) core hole locations and analysis; (e) the expansion or contraction of Oil Shale Leases: (f) the contraction or expansion of Barren Areas; (g) the location of all gas compressors, oil load out facilities, pipelines, and operating, plugged or abandoned wells and related roads; and (h) all proposed wells, gas compressors, oil load out facilities, pipelines and related roads. The Master Area map attached to this Agreement as Appendix "1" is the baseline Master Area Map.

Agreement for Plans and Operations. The Committee shall seek to agree on all Mine Plans and Mining Operations, and all oil and gas plans and Oil and Gas Operations, within Oil Shale Leases, and all amendments to or revisions of those plans and operations. Failure to achieve agreement shall be subject to the procedures for dispute resolution appearing in Article 11.

### ARTICLE 6. MITIGATION OF SURFACE IMPACTS and Oil and Colors Color

### Surface Mining and Oil and Gas Operation 6.1

- (a) The Parties shall use their best efforts to locate their respective surface mining, underground mining, and oil and gas operations, including roads, pits, dumps, overburden piles, water lines, pipelines, well pads, tanks, compressors and other surface facilities so as not to cause Unreasonable Interference with surface and subsurface operations and to accommodate the existing uses and facilities of the other. Each Party may construct access or mine haulage roads across the common surface estates occupied by the Parties. Plans depicting the location, courses, and distances of such access roads shall be submitted to the Committee not later than thirty (30) days prior to the time of filing said plans are not required to be filed with the Governing Agency. Protests or objections to the location of proposed roads shall be filed with the Committee within seven (7) days of receipt of the plans. Resolution of conflicts shall be handled as set forth in Article 11 of the Agreement. Operations planned with surface impacts shall also be submitted to the Committee and the Parties in accordance with Section 7.1 by AMBRE and in accordance with Section 7.2 by TK.
- (b) Construction and Maintenance of Roads. Any road constructed by a Party for access shall be constructed at that Party's own expense, and the constructing Party shall bear all expenses of maintaining and improving the road, except as hereinafter provided.
- (c) Nonexclusive Use of Roads. Use of any road constructed during the term of this Agreement shall be nonexclusive so long as use by the non-constructing Party does not unreasonably interfere with the use and enjoyment of the road by the constructing Party. Furthermore, use constituting more than incidental and occasional use by the non-constructing Party shall entitle the constructing Party to contributions for maintenance and improvement proportionate to the

non-constructing Party's use. Resolution of continuing disputes regarding what constitutes occasional or incidental use or a reasonable contribution shall be resolved as set forth in Article 11 of this Agreement.

- 6.2 **Surface Improvements and Facilities.** Each Party shall conduct its operations in a manner that will not endanger or cause Unreasonable Interference with any existing surface facilities, improvements, workings, or structures made or used in conjunction with the Exploration, drilling for, producing, mining, transportation, storage, processing, or refining of minerals or with the utilization of such facilities, improvements, workings, or structures. Each Party shall conduct its operations in a manner that will not endanger or cause Unreasonable Interference with existing improvements, facilities, structures, and uses of the surface owner or its other lessees and permittees, including farming, ranching or grazing operations, or with the utilization of such improvements, facilities, and structures.
- 6.3 Reclamation. Each Party shall be responsible for all reclamation work arising out of its operations. In areas where two or more Parties utilize the surface for their operations or have improvements, facilities, or structures, each Party will bear its own costs of reclamation, but will cooperate and coordinate to cause any joint reclamation to be accomplished in an expeditious, commercially pludent, and timely manner, and in accordance with the applicable law and rules orders or directives of the Governing Agency. Costs of joint reclamation will be shared in the same proportion as the cost of reclaiming the specific jointly used your or site bears to each Party's use and operation of the road or site controlled Failure to agree on reclamation costs shall be subject to the procedures for dispute resolution appearing in Article 11.
- 6.4 Right to Acquire Surface Sites, Roads, and Facilities. Should either Party desire to abandon operations on the Subject Lands or any part thereof prior to termination of this Agreement, the terminating Party shall provide the other with prior written notice of its intentions to abandon operations and offer the non-abandoning Party the right to purchase any surface sites, facilities, equipments, and roads and assume full liability for the continued use, maintenance, and reclamation of such surface sites, facilities, equipment, and roads. Within ten (10) days of receipt of such written notice, the non-abandoning Party shall declare its intentions in writing to acquire all or a portion of the surface sites, facilities, equipment, or roads and agree to assume liability for their continued use, maintenance, and reclamation. Failure to respond within ten (10) days shall be deemed a rejection of the offer, and the abandoning Party may proceed to remove it facilities and equipment and reclaim its sites.
- 6.5 **Environmental: Disposal of Waste Materials.** Each Party shall comply with all applicable environmental laws governing disposal of waste materials and shall exercise strict care in handling, transportation, and disposal of waste materials designated as hazardous or toxic by the applicable environmental laws.
- 6.6 **Damages.** Each Party shall be liable to the other for damages arising from Unreasonable Interference with the respective operations caused by surface use.

## ARTICLE 7. MITIGATION OF SUBSURFACE IMPACTS

#### 7.1 Mining Operations.

- (a) General Provisions. Mining Operations shall be conducted in compliance with applicable law. Further, AMBRE shall conduct all Exploration and Mining Operations, so far as reasonably practicable, in a manner that will not: (i) cause undue waste to the oil and gas reservoirs in the Subject Lands; (ii) cause Unreasonable Interference with the orderly Exploration of oil and gas or with Oil and Gas Operations; or (iii) constitute a hazard to oil and gas equipment and personnel. In addition to applicable law, AMBRE agrees to abide by the terms of this Agreement.
- (b) Oil Shale Leases. AMBRE may designate Oil Shale Leases and shall depict such areas on the Master Area Map. AMBRE shall update the Master Area map periodically as specified in this Agreement indicating the changes by expansion or contraction of Oil Shale Leases and Active Mining Operations.
- (c) Mine Plans. At least annually of or before May 1 of each year, or at more frequent intervals required by a Governing Agency or agreed to by the Parties, AMBRE shall prepare a update and submit to TK and to the Committee a Mine Plan projecting the actual mining development contemplated during the period of at least two (2) years. Mine Plans shall include all Oil Shale Leases and Protective Zones and shall show changes occurring since the last submitted Mine Plan to all mine workings; mined out, reclaimed and abandoned areas; and, new pit developments projected over the specified period. Mine Plans shall also depict the location of all existing, shut-in, and plugged and abandoned wells. TK understands that Mine Plans must be flexible to accommodate unknown underground mining conditions and agrees to cooperate in solving unforeseen problems.
- (d) Protective Zones. AMBRE shall establish Protective Zones around each existing producing, shut-in, or plugged and abandoned well of a size and dimension required by applicable law. If no applicable law addresses the size and dimension of Protective Zones, each such Protective Zones shall be as agreed by the Parties or as established by a Governing Agency. Protective Zone dimensions may be adjusted from time to time by the Committee to comply with changes in applicable law or to reflect latest known engineering designs. Protective Zones are to be depicted on the Mine Plans and the Master Area Map.
- (e) **Distance Limitations.** AMBRE shall mine no closer than one hundred and fifty (150) feet of any existing drilled, completed, or shut-in well pad for which

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no Protective Zone has been established in its Mine Plan. Further AMBRE shall give at least ninety (90) days written notice to TK that it will mine within three hundred (300) feet of a proposed well location. Such notice shall include the reason the proposed well location cannot be avoided through AMBRE's best efforts. Within fifteen (15) days of providing notice, TK shall respond to AMBRE and the Committee with an alternative well location or its position that the proposed well arising out of this section shall be resolved as set forth in Article 11 of this Agreement.

- (f) Mining Operations. AMBRE will use its best efforts to conduct its Mining Operations and planned future operations to give due regard to existing Oil and Gas Operations and plans of development of TK, including, but not limited to, scheduling its mine phases and plans in such a manner as to cause the least practicable disruption to existing and planned Oil and Gas Operations. Best efforts include, but are not limited to, staging its mining it areas already exploited by TK or determined by TK to be non-economic, thus allowing TK to explore for and develop areas before Mining Operations are commenced, or planning its mine expansions and new pits in areas that would create the least practicable interference with Oil and Gas Operations, consistent with geologic factors and orderly economic development of the Oil Shale reserves.
- (g) Master Area Map Update. AN BRE shall prepare and submit to TK and file with the Committee annually by May 1 of each year, an update to the Master Area Map, including the changes by expansion or contraction of Oil Shale Leases, Barran Areas and Protective Zones.
- (h) Oil Company's Right to Mine Access. TK shall have the right to inspect and examine mine operations and facilities to determine AMBRE's compliance with this Agreement. Notice of TK's intention to inspect and examine AMBRE's operations shall be made in writing to AMBRE not less than three (3) business days prior to the proposed inspection date, with copies of such written request being submitted to the Committee. Such right of inspection and examination shall be coordinated through the Committee and shall be accomplished during normal business hours or other hours acceptable to AMBRE. AMBRE shall grant all reasonable requests for inspection.
- (i) Unitization. AMBRE may unitize its Leases for cooperative and unit development of Oil Shale resources in its sole and absolute discretion in accordance with the applicable law.
- (j) **Damages.** AMBRE will be liable to TK for damages or injury resulting from Unreasonable Interference with Oil and Gas Operations, negligence in conducting Concurrent Development Operations, and breach of the Agreement. Damages shall be limited to actual monetary damages and shall not include incidental or consequential damages.

#### 7.2 Oil and Gas Operations.

- (a) General Provisions. Oil and Gas Operations shall be conducted in compliance with applicable law. Further, TK shall conduct Oil and Gas Operations, so far as reasonably practicable, in a manner that will not: (i) cause undue waste to the Oil Shale deposits in the Subject Lands; (ii) cause Unreasonable Interference with the orderly conduct of Exploration or Mining Operations; or (iii) constitute a hazard to mining equipment and personnel. In addition to the applicable law, TK agrees to abide by the terms of this Agreement.
- (b) Plans of Operations. At least annually on or before May 1 of each year, or at more frequent intervals if required by a Governing Agency or by mutual agreement of the Parties, TK shall prepare and submit to MBRE a plan of projected operations contemplated for the period. Plans for operation shall show all existing drilled, completed, shut-in, and plugged and abandoned wells, and proposed wells to be drilled. TK agrees to accommodate Mine Plans and Mining Operations so far as reasonably practicable.
- (c) Master Area Map Update. TK shall prepare and submit to AMBRE and file with the Committee annually by May 1 of each year, an update to the Master Area Map, including the changes to proposed well locations, surface facilities and pipelines.
- (d) **Drilling in Designator Oil Shale Leases.** Subject to the terms of this Agreement and applicable law. TK may drill Exploratory Wells and Development Wells at locations of its choosing in Oil Shale Leases.
- (e) Drilling in Oil Shale Leases.
  - (i) Development Wells. The drilling of Development Wells in Oil Shale Leases is expressly permitted in accordance with well density established by the Governing Agency order or well-location and siting rules, subject to approval of the Governing Agency and notice to the Committee, and to the terms of this Agreement. TK will use its best efforts to locate its wells in Barren Areas, within Protective Zones or within Drilling Islands established by the Governing Agency or by agreement of the Parties so long as such efforts do not unreasonable interfere with its Oil and Gas Operations or cause it to incur significant or material additional costs.
  - (ii) Exploratory Wells. The drillings of Exploratory Wells in Oil Shale Leases is expressly authorized, but shall be limited to (a) wells drilled from a Barren Area; or (b) if no Barren Areas are reasonably available, then by wells drilled from Drilling Islands or at such locations as may be agreed to by the Parties. TK agrees that the protocol for the location and drilling of its wells is first to seek

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acceptable geologic locations within Barren Areas; then if no Barren Areas are reasonably available, from Drilling Islands established by the Committee or at such locations as may be agreed to by the Parties.

- (iii) Directional Drilling. Except as directed by the Governing Agency, the Parties agree that TK is under no obligation to drill any Directional Well on the Subject Lands and Subject Leases. However, TK agrees to use its best efforts to directionally drill its wells in Oil Shale Leases either from Barren Areas or from Drillings Islands provided drilling directionally would not cause it to incur significant or material additional costs.
- (f) **Drilling Fluid.** TK agrees to use a drilling medium through the Oil Shale zones within one thousand (1,000) feet of the surface that will minimize the Oil Shale from dissolving in solution and that will not cause unreasonable waste, or otherwise cause Unreasonable Interference with existing or proposed Mining Operations of Oil Shale deposits. TK agrees to add other admixtures deemed by the Committee and current practice to be reasonably necessary for the protection of the Oil Shale or in overcoming associated problems, it being the intention of the Parties to prevent enlarged drill holes.
- (g) Drilling in Compliance with Plan of Development. TK will use its best efforts to plan its development and locate and drill its wells so as to give due regard to existing Mining Operations and plans, including, but not limited to, scheduling its priorities for drilling and development in such a manner as to cause the least disruption to active and planned Mining Operations. Best efforts include, but are not limited to, coordinating the drilling to commence in areas already mined by AMBRE, allowing AMBRE to mine through areas before oil and gas drilling operations are commenced, or drilling in areas that would create the least practicable interference to Mining Operations, consistent with geologic factors and orderly and economic development of the oil and gas reserves.
- (h) Existing Geophysical Information. TK agrees that AMBRE may review, on a confidential basis, all existing proprietary geophysical information and data owned by TK from the surface of the Subject Lands to the depth of one thousand (1,000) feet. Such review shall be at AMBRE's sole cost.
- (i) Well Logs. TK agrees to provide, on a confidential basis, any gamma ray-neutron, gamma ray-sonic, or other Well Logs it runs through the Oil Shale geologic zones in the Subject Lands from the surface to the depth of one thousand (1,000) feet. In addition, AMBRE may have a representative present at the location of each new well drilled on the Subject Lands for the purpose of reviewing and sampling drill cuttings from the surface to the depth of one

- thousand (1,000) feet. Such review and sampling shall be at AMBRE's and it representative's sole risk and cost.
- (j) Casing Program. In addition to the requirements of applicable law pertaining to well casing requirements, TK agrees to set well casing from the top of the Oil Shale zones or sections through the entire geologic zone of all Oil Shale deposits to a maximum depth of one thousand two hundred (1,200) feet. Cement used in setting the casing or in plugging a well which comes in contact with the Oil Shale geologic zones shall be of a chemical composition designed to minimize dissolution or other impairment of the Oil shale.
- (k) **Dry Holes.** If a well is determined to be a dry hole. TK agrees to place cement plugs at least one hundred (100) feet across the top and the base of the Oil Shale geologic zones identified by AMBRE to a maximum depth of one thousand two hundred (1,200) feet and across any oil gas, or water shows or as directed by the Governmental Agency. TK shall see plugs inside a properly cemented casing string. No well will be temporarily abandoned with an open hole in the Oil Shale geologic zone unless otherwise agreed to by the Parties.
- (l) Unitization. TK may unitize its Leases for cooperative development of the oil and gas deposits, in its sole and absolute discretion in accordance with applicable law.
- (m) AMBRE's Right to Well-Site Access. AMBRE shall have the right to inspect any oil and gas well-site locations, facilities, and operations to determine TK's compliance with this Agreement. Notice of AMBRE's intention to inspect and examine TK's operations shall be made in writing to TK not less than three (3) business days prior to the proposed inspection date, with copies of such written request being submitted to the Committee. Such right of inspection and examination shall be coordinated through the Committee and shall be during normal business hours or other hours acceptable to TK. TK shall grant all reasonable requests for inspection.
- (n) **Damages.** TK will be liable to AMBRE for damages or injury resulting from undue waste of Oil Shale deposits, Undue Interference with Mining Operations, negligence in conducting Concurrent Operations, and breach of this Agreement. Damages shall be limited to actual monetary damages and shall not include incidental or consequential damages.

## ARTICLE 8. INFORMATION EXCHANGE

8.1 **General Provisions.** The Parties agree to provide to the Committee the original or photocopies of all Exchange Information and other relevant information to enable the Committee to make informed judgments regarding their respective operating intentions

and plans. The Parties agree to maintain the confidentiality of all Exchange Information and other information designated as such by a Party.

### ARTICLE 9. LIMITATION ON LIABILITY

- 9.1 Extra Costs. Each Party shall bear the costs of conforming operations to Concurrent Development Operations, including but not limited to, the costs of admixtures to drilling fluids; well casing, cementing, and plugging requirements in connection with Oil and Gas Operations; and any modifications to Mine Plans for Mining Operations.
  - (a) Associated Costs of Compliance by TK. TK agrees to bear all operational costs in excess of normal and customary operating costs for oil and gas wells drilled which are designed to protect or mitigate interference with or damage to the Oil Shale deposit as a cost of the privilege of conducting coordinated Concurrent Development Operations. Such additional costs shall include, but are not limited to, costs for drilling fluid admixtures, deferral of operations, well casing and cementing programs, and plugging and abandoning programs.
  - (b) Associated Costs of Compliance by AMBRE. AMBRE agrees to bear all operational costs in excess of normal and customary operating costs for Mining Operations which are designed to protect or mitigate interference with or access to the oil and gas deposits as a cost of the privilege of conducting coordinated Concurrent Development Operations. Such additional costs shall include, but are not limited to, additional surveys, special equipment and deferral of operations, Protective Zones, costs of determining Oil Shale deposits, and additional monitoring equipment and personnel.
- 9.2 Costs of Suspending or Deferring Operations. Each Party shall bear its own costs of suspension of Lease terms and Deferred Operations directed by the Governing Agency or by agreement of the Parties, including, but not limited to: (a) costs of relocation, removing, or storing surface equipment; (b) placing mining facilities in care-taker status; and (c) mobilizing equipment and personnel for start-up of operations at the end of the period of Deferred Operations.
- 9.3 Costs of Relocating, Removing, and Storing Equipment and Facilities Not Associated with Deferred Operations. Each Party shall bear its own costs of relocating, removing, and storing equipment and facilities under circumstances not amounting to suspension of lease terms and Deferred Operations.
- 9.4 Costs of Loss of Mineral Resources. The Parties agree that minerals left in place either in Protective Zones or by virtue of inability to access deposits to accommodate the operations of the other shall be deemed acceptable waste for the period of Deferred Operations, or as other wise agreed by the Parties.

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# ARTICLE 10. INDEMNITY

- 10.1 Indemnity and Agreement to Hold Harmless. TK agrees to indemnify and to defend and hold AMBRE, its officers, employees, contractors, subcontractors, and agents, harmless for, from, and against any and all claims, damages, judgments, losses, and expenses, including attorney fees, arising out of or resulting from, directly or indirectly, TK's negligence in failing to comply with the additional operating requirements necessary to implement and comply with this Agreement. Reciprocally, AMBRE agrees to indemnify and to defend and hold TK, its officers, employees, contractors, subcontractors, and agents, harmless for, from, and against any and all claims, damages, adgments, losses, and expenses, including attorney fees, arising out of or resulting from directly or indirectly, AMBRE's negligence in failing to comply with the additional operating requirements necessary to implement and comply with this Agreement. This indemnity shall apply to damage to, or loss of, materials, tools, and equipment owned or supplied by the Paries, their officers, employees, contractors, subcontractors, and agents or supplied by a third party and used in normal and customary operations. This indemnity shall survive the termination of this Agreement so long as the incident for which indemnity is sought occurred during the term of this Agreement and shall continue thereafter so long as either Party is subject to any possible claim or threatened, pending, or completed action, suit or preceding, whether civil, criminal, or investigative.
- Special Environmental Indemnity. Each Party will indemnify and hold the 10.2 other its officers, employees, contractors, subcontractors, and agents, harmless for, from and against any claims or injuries directly or indirectly arising out of the indemnifying Party's operations attributable to: (a) the use, generation, manufacture, production, storage, release, threatened release, discharge, disposal, or presence of a hazardous substance or hazardous or toxic material (as defined by all applicable environmental laws) on, under, or about the Subject Lands; (b) the violation of any environmental laws; (c) any claim, inquiry, investigation, or proceeding relating to any environmental conditions on or about the Subject Lands; (d) any other environmental contamination of the Subject Lands or adjacent property; and (e) any remedial work required by the applicable environmental laws. This indemnification obligation includes, without limitation, all consequential damages, and the costs of any required or necessary investigation, analyses, repair, cleanup, remediation, detoxification, testing or monitoring of the Subject Lands and the preparation and implementation of any closure, remedial, or other required plans. This indemnity shall survive the termination of this Agreement and shall continue thereafter so long as either Party is subject to any possible claim or threatened, pending, or completed action, suit or proceeding, whether civil, criminal, or investigative, regarding the health, industrial hygiene, or environmental conditions on, under, or about the Subject Lands.

## ARTICLE 11. DISPUTE RESOLUTION

- 11.1 Resolution by Technical Coordinating Committee. At any time it appears to any Committee member or to any Party that there is an existing or potential conflict with respect to the performance of obligations under this Agreement, the Committee member or the Party may call a meeting of the Committee to consider and attempt to arrive at a satisfactory resolution of the conflict. If the conflict is resolved to the satisfaction of the Committee and the Party involved, a written memorandum of resolution shall be made and signed by the Parties or their representatives.
- 11.2 **Arbitration.** Any dispute not resolved by the Committee or the Parties shall be resolved by binding arbitration, unless arbitration can be proven, by the Party so claiming, to be impossible, commercially impracticable, inequitable or materially unsuitable to resolve the particular dispute. Disputes will be arbitrated pursuant to the applicable commercial rules of the American Arbitration Association. The arbitration shall occur in Billings, Montana, or Salt Lake City, Utah, unless otherwise agreed by the Parties. The Federal Arbitration Act shall apply to the construction and interpretation of the arbitration agreement.
  - (a) Arbitration Panel. Ar arbitration decision shall be made by the majority vote of three arbitrators selected as provided in this paragraph.
  - (b) Three Person Panel. The panel shall consist of one person each of; (i) a retired judge at the state or federal district court level; (ii) a person with at least ten years experience in mining engineering or geology; and (iii) a person with at least ten years experience in petroleum engineering or geology. The American Arbitration Association shall submit a list of persons meeting the criteria outlined above for each category or arbitrator, and the Parties shall elect an arbitrator from each category in the manner established by the rules of the American Arbitration Association.
  - (c) Fees and Costs. The arbitrators shall award costs and expenses, including reasonable witness fees, to the prevailing Party.
  - (d) Attorney's Fees. In any dispute arising under this Agreement, the prevailing Party shall be entitled to reasonable attorneys' fees and costs. It is not necessary for an arbitration or other adjudicatory proceeding to be initiated in order for liability for attorneys' fees under this paragraph to arise.
- 11.3 **Judicial Enforcement.** Any award granted through arbitration and not resolved or concluded by the Committee or the Parties may, at the prevailing Party's option, be

submitted to a court of competent jurisdiction in Billings, Montana, or Salt Lake City, Utah, for enforcement.

# ARTICLE 12. MISCELLANEOUS PROVISIONS

- 12.1 **Effective Date.** This Agreement shall become effective as of the date first written above.
- 12.2 **Headings.** The headings of the Agreement are for reference only and will not limit or define the meaning of any provision of the Agreement.
- 12.3 Counterparts Authorized. This Agreement may be executed in multiple counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same Agreement.
- 12.4 **Termination of Agreement.** Except as otherwise provided, this Agreement shall terminate upon the first to occur of: (a) the termination of all of one Party's Leases; (b) completion of the operations of one or both of the Parties; (c) by written agreement of the Parties; or (d) upon ninety (90) days' notice of one party to the other party.
- Notices. Notices from any Party to the other or to the Committee shall be in writing and shall be deemed to have been given when hand-delivered or when (a) deposited in the United States mail, postage prepaid, addressed to the recipient Party; (b) transmitted by facsimile transmission; or (c) transmitted by express delivery service, freight prepaid. The date notice is deemed to be effective shall be the date on which the notice is actually received.

The addresses for notification are:

T-K Production Company (or its Committee member) 2812 1<sup>St</sup> Ave North Suite 408
Billings MT 59101

Attn: Thomas M. Hauptman, President

Office Number: (406) 259-8480 Facsimile Number: (406) 259-2124

Ambre Energy North America, Inc. 170 South Main Street Suite 700 Salt Lake City, UT 84101

Attn: John H. Thomas, VP Legal & General Counsel

Office Number: (801) 539-3803 Facsimile Number: (801) 539-3789

- 12.6 Confidentiality. The Parties shall keep the Exchange Information and other information designated as confidential in strict confidence, and shall not disclose it to any other person or entity or use it for any purpose other than for the specific scope of this Agreement without the prior written content of the other. All confidential information shall remain the property of the Party who developed it; and as to information jointly developed by the Committee, the joint property of the Parties. Both Parties shall protect and safeguard the Exchange Information and shall prevent the unauthorized use, dissemination, or publication of the information. All Exchange Information and other confidential information shall be stamped confidential and shall be treated as confidential by the Parties unless it was lawfully in the possession of the receiving Party prior to disclosure, has become part of the public record at the Governing Agency or part of the public domain, was received by a Party from another source which has not breached any confidentiality requirement or is compelled to be disclosed by law.
- 12.7 Amendment by Agreement. This Agreement may not be supplemented, modified, or amended except by a written agreement signed by a duly authorized representative of each Party.
- 12.8 Agency. This Agreement shall not be construed to create, either expressly or by implication, the relationship of agent and principal, joint venturers, mining partners or general partners between or among the Parties. No Party is authorized to act on behalf of the other Party on any matter related to the subject matter of this Agreement.
- 12.9 **Successors and Assigns.** This Agreement shall be binding upon and inure to the benefit of the Parties and their respective successors and assigns.
- 12.10 Construction of Agreement. No rule of strict construction shall be applied with respect to this Agreement against any Party to the Agreement. Whenever possible, each provision shall be interpreted in a manner to be valid under applicable law. However, if any provision is held to be prohibited by or invalid under applicable law, such provision will be ineffective only to the extent of such prohibition or invalidity, and this Agreement shall not be deemed void as the result of any of its individual provisions being deemed invalid.

- 12.11 **Governing Law.** This Agreement shall be governed by the laws of the State of Utah without giving effect to the conflict of laws principles.
- 12.12 **Conflict with Applicable Law.** In the event any term or provision of this Agreement conflicts with applicable law, applicable law shall control.
- 12.13 **Entire Agreement.** This Agreement constitutes the entire agreement between the Parties pertaining to its subject matter. All prior and contemporaneous agreements, representations, and understandings of the Parties, oral or written, pertaining to the subject matter are superseded by and merged in the Agreement.

T-K PRODUCTION COMPANY

CONTRIBUTION

AMBRE ENERGY NORTH AMERICA, INC.

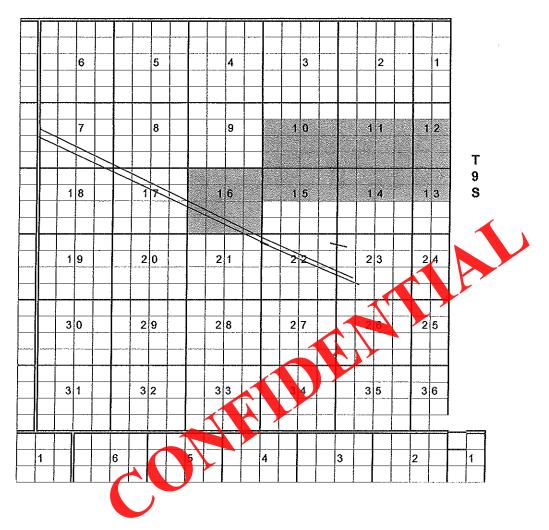
Thomas M. Hauptman

President

John H. Thomas Secretary

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# BONANZA OIL SHALE BLOCK Ambre Energy North American R 25 E Oil Shale



### COOPERATIVE DEVELOPMENT AGREEMENT

THIS COOPERATIVE DEVELOPMENT AGREEMENT (the "Agreement") is made and entered into this 19 day of June, 2014 (the "Effective Date"), by and between T-K Production Company, having a mailing address of PO Box 2235, Billings, Montana 59103 ("TK"), and EAO State Leases, LLC and affiliates, having a mailing address of 307 West 200 South, Suite 4005, Salt Lake City, Utah 84101 ("EAO"), (individually a "Party" and collectively the "Parties"), who in consideration of mutual promises agree as follows:

# ARTICLE 1. PARTIES AND OPERATIONS

- 1.1 TK is a Montana corporation licensed to do business in Utah. TK holds and operates Utah State Oil, Gas and Associated Hydrocarbons Leaves (the "TK Lease") issued by the Utah School and Institutional Trust Lands Administration ("STLA") on the Subject Lands (on lands as set out by the legal description marked Exhibit "A to this Agreement) the "TK Lease", and will be conducting future Oil and Gas Operations thereon.
- 1.2 EAO is a Utah corporation licensed to to business in Utah. EAO holds a Utah State Lease for Oil Shale (the "EAO Lease") issued by VTLA, and will be developing oil shale and associated substances on the Subject Lands, on lands as set out by the map marked Exhibit "B" to this Agreement) the "EAO Lease" and will be conducting future Mining Operations thereon.

# ARTICLE 2. PURPOSES

- 2.1 Coordinated Operations. Applicable laws and respective Lease terms require Multiple Use of the Subject Lands and expressly provide for the concurrent or simultaneous exploration and extraction of the Respective Mineral Resources from the Subject Lands. The Parties recognize and understand that occasional operational conflicts may arise. The Parties therefore agree that cooperation and coordination of their Concurrent Development Operations and orderly resolution of conflicts is essential to the commercial viability of their respective Leases and the maximum ultimate recovery of their Respective Mineral Resources in an expeditious and economical manner consistent with principles of Multiple Use and this Agreement. The primary purposes of the Agreement are to: (a) address and protect the relative rights of the Parties in a cooperative manner; (b) protect the safety and health of all personnel; (c) protect the Respective Mineral Resources and other natural resources from damage, injury and waste; and (d) provide for Concurrent Development Operations.
- 2.2 Maximum Ultimate Economic Recovery. TK and EAO desire to protect their relative rights to develop their Leases and enjoy their Leaseholds and surface rights in a cooperative, coordinated and harmonious manner that will comply with applicable law and result in the maximum ultimate economic recovery of their Respective Mineral Resources with minimum waste and conflicts.

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- 2.3 **Protecting Personnel, Equipment, and Resources**. TK and EAO agree that a paramount consideration of the Parties while conducting Concurrent Development Operations is protecting life, limb, property and other natural resources from damage and injury while achieving the maximum ultimate economic recovery of their Respective Mineral Resources.
- 2.4 Protecting the Surface Estate. The Parties agree to conduct their operations in a manner that will minimize damage to surface resources consistent with their respective rights to use so much of the surface as reasonably necessary to explore for, mine and develop, remove and process their Respective Mineral Resources, recognizing that: (a) EAO's Mining Operations will involve surface and or underground mining of Oil Shale as well as onsite processing and disposal of the overburden and other waste rock; and (b) the drilling of Directional Wells by TK can significantly increase the time and costs to successfully drill and complete each well, and in some cases the drilling of a replacement well at a different surface location to achieve the target objective.
- 2.5 Expectations of Parties. TK and EAO, by entering into their respective Leases, contemplated present rights to explore for, produce, and remove their Respective Mineral Resources. The Parties agree to address and use commercially reasonable efforts to coordinate activities and to timely address operational conflicts. The Parties also agree to make commercially reasonable efforts to conduct their operations and resolve their disputes in a manner that will allow Concurrent Development Operations of the overlapping Leasehold estates. It is therefore agreed that among the possible alternative procedures for Concurrent Development Operations, deferring operations of one Party in favor of another should be a method of last resort and shall be utilized only upon agreement of the Parties of by a rule, order or directive of a Governing Agency.
- 2.6 Interference and Some Delays Anticipated. In the spirit of coordinated and cooperative Concurrent Development Operations, TK and EAO recognize that some operational interference, inaccessibility to and delays involving portions of their Respective Mineral Resources may be inevitable. The Parties therefore confirm their understanding and agree that reasonable interference, and limited inaccessibility to and delays involving portions of their Respective Mineral Resources are the quid pro quo to facilitate present contemporaneous mineral development operations.

# ARTICLE 3. DEFINITIONS

- 3.1 Critical Terms. In addition to terms defined in other articles to this Agreement, the following definitions shall control this Agreement:
  - (a) "Active Mining Operations" shall mean all projected operations for the extraction of Oil Shale within an approved Mine Plan over a five year period.
  - (b) "Barren Areas" shall mean those areas contained within an Oil Shale Enclave deemed or believed to be barren of Mineable Reserves, including areas in which the reserves have already been mined-out.

- (c) "Casing Program" shall mean the special requirements for casing a wellbore which are imposed by applicable law or this Agreement to protect mineral bearing formations of one Party from drilling, extraction, or production operations of another.
- (d) "Cement Bond Log" shall mean that log run to test the quality of the cement-to-casing bond around cemented casing of a well.
- (e) "Concurrent Development Operations" shall mean the right of TK and the right of EAO to conduct mineral extraction operations and related activities in close proximity on the Subject Lands, and on overlapping Leases, at the same time.
- (f) "Deferred Operations" shall mean that circumstance when, either by agreement of the Parties or by direction of a Governing Agency, one of the Parties suspends and defers its operations in any particular area of the Subject Lands for a period not to exceed two (2) years in favor of the other Party's operations continuing on the same area of the Subject Lands.
- (g) "Designated Oil Shale Areas" shall mean those areas designated by agreement of the Parties or the Governing Agency as areas targeted for mining of Oil Shale under a current Mine Plan.
- (h) "Development Well" shah mean a well drilled to a known producing formation in a previously discovered field, as distinguished from an Exploratory Well.
- (i) "Directional Well" shall mean a well in which the wellbore departs materially from the vertical
- (j) "Drilling Island" shall mean that geographic area designated for the drilling of: (i) vertical wells from authorized surface locations; and (ii) one or more Directional Wells designated to bottom hole under lands for which no surface locations are available either by agreement of the Parties, or because of surface conditions, or surface occupancy prohibitions contained in lease or operating stipulations promulgated by the Governing Agency.
- (k) "Exchange Information" shall mean those documents; geologic, geographic, or other maps or plats; cross-sections; Mine Plans; plans of operations; surveys; correspondence; oral communications; consultant reports; technical reports: notices; permits; or update to any document required by this Agreement or by rules of the Governing Agency, to be exchanged or to be submitted to the Committee, which are reasonably necessary to, and for the purpose of, enabling the Committee to make informed judgments regarding their respective operating intentions or plans; or any document voluntarily exchanged or shared with a Party or the Committee.
- (l) "Exploration" shall mean in the oil shale context, those operations connected with locating the presence of economic deposits of oil shale and establishing their nature, shape, depth, and grade, including geological surveys, geophysical prospecting, boreholes and trial pits,

headings, drifts or tunnels. In the conventional oil and gas context Exploration shall include aerial surveys, geophysical surveys, geological studies, core tesing, and drilling of Exploratory Wells.

- (m) "Exploratory Well" shall mean an oil and gas well drilled greater than one (1) mile from a well producing in commercial quantities from a pool or common source or supply or a well drilled with the expectation of extending the known limits of an oil and gas field already partly developed.
- (n) "Governing Agency" shall mean SITLA, the Utah Division of Oil, Gas and Mining or other state or federal administrative agencies having leasing, regulatory or operational jurisdiction over the conduct of the Parties. There may be circumstances when one or more state or federal agency may have concurrent jurisdiction over the leasing, regulatory or operations of the Parties.
- (o) "Leases" or 'Leaseholds" shall mean collectively file TK Lease and the EAO Lease.
- (p) "Mine Plan" shall mean the pre-design of the detailed layout, main roadways, and workings of a mine; including, but not limited to, the general description of the geologic conditions, mineral analysis, pit and overburden areas, reserve analysis, basic mining equipment, phases of mining, time trams for development and such other data as might be required by the Governing Agency to be submitted for approval of Mining Operations. The Mine Plan shall be constitued as the official document or permit initiating Mining Operations on the Subject Lands.
- (q) "Mining Operations" shall mean actual mining activities directed to the severance, removal, processing and transportation of Oil Shale and associated overburden and interburgen. For purposes of this Agreement, Mining Operations shall not include Exploration.
- (r) "Multiple Use" shall mean, as between the Parties, conducting Mining Operations and Oil and Gas Operations in a harmonious and coordinated manner that takes into account: (i) the expectations of each Party to present enjoyment of its Leasehold estate; (ii) the relative economics of the Parties; and (iii) the relative mobilization, planning, and operational needs of each Party without undue impairment to the productivity and operations of the other.
- (s) "Oil and Gas Operations" shall mean all activities directed to the drilling for, production, processing, and transportation of oil and gas, including actual staging, dirt work and drilling operations. Oil and Gas Operations shall not include geophysical activities conducted prior to drilling for oil and gas.
- (t) "Oil Shale" shall mean those substances generally known as "oil shale" regardless of color, which contain kerogen and other substances which are commonly found in what are commonly known as "oil shale," as the term is more fully defined in the EAO Lease.

- (u) "Oil Shale Enclaves" shall mean those lands within a Designated Oil Shale Area subject to Active Mining Operations in one or more oil shale ore zones or areas not presently being mined but which contain known mineral resources of Oil Shale.
- (v) "Protective Zone(s)" shall mean an area of the surface and the underlying Oil Shale left in place on the Subject Lands to serve as a Protective Zone for existing and future Oil and Gas Operations being conducted during Concurrent Development Operations.
- (w) "Respective Mineral Resources" shall mean (i) for TK, the recoverable oil, gas and associated hydrocarbons described and covered under the TK Lease; and (ii) for EAO, the recoverable Oil Shale and associated minerals described and covered under EAO Lease.
- (x) "Subject Lands" shall mean those lands subject to this Agreement, as described in Exhibit "A" attached hereto, as may be amended from time to time, which encompasses all of the overlapping lands between the TK Lease and EAO Lease. In addition, the Subject Lands shall include any additional lands as mutually agreed upon by the Parties.
- (y) "Unreasonable Interference" shall mean interference in excess of that anticipated interference necessarily or appropriately interposed in the spirit of cooperative and coordinated development of the Respective Mineral Resources, it being understood that some reasonable delay resulting from the operations of the other Party may be both necessary and appropriate
- (z) "Well Logs" shall mean those electrical, gamma ray-neutron, sonic, or appropriate logs run by TK to identify the stratigraphic bottoms and tops of geologic formations or stratigraphic intervals.
- 3.2 Undefined Terms to Conform and Applicable Law. All undefined terms used in this Agreement shall have the meaning customarily used in the mining and oil and gas industries unless the applicable term is defined by statute or regulation of a Governing Agency, in which case the term shall have the meaning prescribed by the Governing Agency.

## ARTICLE 4. LANDS AND LEASES SUBJECT TO AGREEMENT

- 4.1 **Land Description**. This Agreement shall apply to the operations of the Parties on the Subject Lands described in Exhibit "A" attached hereto and incorporated herein by this reference, all of which are located in Uintah County, Utah.
- 4.2 **Master Area Map**. The Subject Lands and Subject Leases are depicted on the Master Area Map attached to this Agreement as Exhibit "B" and incorporated herein by reference.

# ARTICLE 5. TECHNICAL COORDINATING COMMITTEE

- 5.1 Composition of Committee. The Parties agree to establish a Technical Coordinating Committee ("Committee") consisting of at least one representative of TK and at least one representative of EAO; and in the event a Governing Agency is required to be a signatory to any cooperative agreements affecting multiple mineral development conflicts, with the mutual consent of the Parties, one representative of each such Governing Agency.
- Purposes of Committee and Venue. The purposes of the Committee shall be to assist the Parties in coordinating their activities and operations by: (a) providing a forum for discussion and to submit Exchange Information regarding the current and proposed operations of each Party; (b) gathering, studying, and disseminating technological data regarding new or improved mining, reclamation and transportation practices and procedures, and oil and gas drilling, completion, production, re-working, plugging and abandoning and transportation practices and procedures that bear on the protection of personnel and equipment and the preservation of all mineral resources subject to this Agreement; and (c) aiding in the resolution of conflicts which may arise between them. All Committee meetings shall be in Salt Lake City, Utah, unless otherwise agreed by the Parties.
- Master Area Map. In addition to the duties enumerated in this Article, the Committee shall maintain a "Master Area Map" covering the Subject Lands and Subject Leases and prepared by the Parties to which is posted at least once annually by May 1 of each calendar year (or as mutually agreed upon by the Parties in writing), all modifications made since the last submittal, including, but not limited to: (a) boundaries of the Subject Lands and existing roads; (b) changes in and to the Subject Leases; (a) the location and size to scale of existing, planned and proposed Oil Shale mines, including roads, pits, overburden storage areas, processing plants, workings, facilities and related operations; (d) core hole locations and analysis; (e) the expansion or contraction of Oil Shale Enclaves: (f) the contraction or expansion of Barren Areas; (g) the location of all gas compressors, oil load out facilities, pipelines, and operating, plugged or abandoned wells and related roads; and (h) all proposed wells, gas compressors, oil load out facilities, pipelines and related roads. The Master Area map attached to this Agreement as Exhibit "B" is the baseline Master Area Map.
- 5.4 Agreement for Plans and Operations. The Committee shall seek to agree on all Mine Plans and Mining Operations, and all oil and gas plans and Oil and Gas Operations, within Oil Shale enclaves, and all amendments to or revisions of those plans and operations. Failure to achieve agreement shall be subject to the procedures for dispute resolution appearing in Article 11.

# ARTICLE 6. MITIGATION OF SURFACE IMPACTS

- 6.1 Surface Mining and Oil and Gas Operations.
  - (a) The Parties shall use commercially reasonable efforts to locate their respective surface mining, underground mining, and oil and gas operations, including roads, pits, dumps,

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overburden piles, water lines, pipelines, well pads, tanks, compressors and other surface facilities so as not to cause Unreasonable Interference with surface and subsurface operations and to accommodate the existing uses and facilities of the other. Each Party may construct access or mine haulage roads across the common surface estates occupied by the Parties. Plans depicting the location, courses, and distances of such access roads shall be submitted to the Committee not later than forty-five (45) days prior to: (i) the time of filing said plans with the Governing Agency. Protests or objections to the location of proposed roads shall be filed with the Committee within thirty (30) days of receipt of the plans. Resolution of conflicts shall be handled as set forth in Article 11 of the Agreement. Operations planned with surface impacts shall also be submitted to the Committee and the Parties in accordance with Section 7.1 by EAO and in accordance with Section 7.2 by TK.

- (b) Construction and Maintenance of Roads. Any road constructed by a Party for access shall be constructed at that Party's own expense, and the constructing Party shall bear all expenses of maintaining and improving the road except as hereinafter provided.
- (c) Nonexclusive Use of Roads. Except as otherwise set forth herein, use of any road constructed during the term of this Agreement shall be nonexclusive so long as use by the non-constructing Party does not unreasonably interfere with the use and enjoyment of the road by the constructing Party Notwithstanding the foregoing, either Party shall have the right to designate certain bads constructed by such Party as exclusive use road and prohibit the use of such road by the other Party. For nonexclusive use roads, use constituting more than incidental and occasional use, or resulting in unreasonable wear and tear to the roadway, by the non-constructing Party shall entitle the constructing Party to contributions for maintenance and improvement proportionate to the non-constructing Party's use as determined in the constructing Party's reasonable discretion. Resolution of continuing disputes regarding what constitutes occasional or incidental use or a reasonable contribution shall be resolved as set forth in Article 11 of this Agreement.
- 6.2 Surface Improvements and Facilities. Each Party shall conduct its operations in a manner that will not endanger or cause Unreasonable Interference with any existing surface facilities, improvements, workings, or structures made or used in conjunction with the Exploration, drilling for, producing, mining, transportation, storage, processing, or refining of minerals or with the utilization of such facilities, improvements, workings, or structures. Each Party shall conduct its operations in a manner that will not endanger or cause Unreasonable Interference with existing improvements, facilities, structures, and uses of the surface owner or its other lessees and permittees, including farming, ranching or grazing operations, or with the utilization of such improvements, facilities, and structures.
- 6.3 Reclamation. Each Party shall be responsible for all reclamation work arising out of its operations. In areas where two or more Parties utilize the surface for their operations or have improvements, facilities, or structures, each Party will bear its own costs of reclamation, but will cooperate and coordinate to cause any joint reclamation to be accomplished in an expeditious, commercially prudent, and timely manner, and in accordance with the applicable law and rules,

orders or directives of the Governing Agency. Costs of joint reclamation will be shared in the same proportion as the cost of reclaiming the specific jointly used road or site bears to each Party's use and operation of the road or site controlled. Failure to agree on reclamation costs shall be subject to the procedures for dispute resolution appearing in Article 11.

- 6.4 Right to Acquire Surface Sites, Roads, and Facilities. Should either Party desire to abandon operations on the Subject Lands or any part thereof prior to termination of this Agreement, the terminating Party shall provide the other with prior written notice of its intentions to abandon operations and offer the non-abandoning Party the right to purchase any surface sites, facilities, equipments, and roads and assume full liability for the continued use, maintenance, and reclamation of such surface sites, facilities, equipment, and roads. Within thirty (30) business days of receipt of such written notice, the non-abandoning Party shall declare its intentions in writing to acquire all or a portion of the surface sites, facilities, equipment, or roads and agree to assume liability for their continued use, maintenance, and reclamation. Failure to respond within thirty (30) business days shall be deemed a rejection of the offer, and the abandoning Party may proceed to remove it facilities and equipment and reclaim its sites.
- 6.5 Environmental: Disposal of Waste Materials. Each Party shall comply with all applicable environmental laws governing disposal of waste materials and shall exercise strict care in handling, transportation, and disposal of waste materials designated as hazardous or toxic by the applicable environmental laws.
- 6.6 **Damages.** Each Party shall be liable to the other for actual damages arising from Unreasonable Interference with the respective operations caused by surface use.

# ARTICLE 7. MITIGATION OF SUBSURFACE IMPACTS

### 7.1 Mining Operations.

- (a) General Provisions. Mining Operations shall be conducted in compliance with applicable law. Further, EAO shall conduct all Exploration and Mining Operations, so far as reasonably practicable, in a manner that will not: (i) cause undue waste to the oil and gas reservoirs in the Subject Lands; (ii) cause Unreasonable Interference with the orderly Exploration of oil and gas or with Oil and Gas Operations; or (iii) constitute a hazard to oil and gas equipment and personnel.
- (b) Oil Shale Enclaves. EAO may designate Oil Shale Enclaves and shall depict such areas on the Master Area Map. EAO shall update the Master Area map periodically as specified in this Agreement indicating the changes by expansion or contraction of Oil Shale Enclaves and Active Mining Operations.
- (c) Mine Plans. As Mine Plans are developed or modified for the Subject Lands, or as required by a Governing Agency or agreed to by the Parties, EAO shall submit to TK and the Committee a Mine Plan projecting the actual mining development contemplated

during the period of at least two (2) years. The Mine Plan shall include all Oil Shale Enclaves and Protective Zones within the Subject Lands and shall show changes occurring since the last submitted Mine Plan to all mine workings; mined out, reclaimed and abandoned areas; and, new pit developments projected over the specified period. Mine Plans shall also depict the location of all existing, shut-in, and plugged and abandoned wells. TK understands that Mine Plans must be flexible to accommodate unknown underground mining conditions and agrees to cooperate in solving unforeseen problems.

- (d) **Protective Zones.** EAO shall establish Protective Zones around each existing producing, shut-in, or plugged and abandoned well of a size and dimension required by applicable law. If no applicable law addresses the size and dimension of Protective Zones, each such Protective Zones shall be as agreed by the Parties or as established by a Governing Agency. Protective Zone dimensions may be adjusted from time to time by the Committee to comply with changes in applicable law or to reflect latest known engineering designs. Protective Zones are to be depicted on the Mine Plans and the Master Area Map.
- (e) Distance Limitations. EAO shall mine in closer than one hundred and fifty (150) feet of any existing drilled, completed or shut in wellhead for which no Protective Zone has been established in its Mine Plan. Forther EAO shall give at least ninety (90) days written notice to TK that it will mine within three hundred (300) feet of a proposed well location. Such notice shall include the reason the proposed well location cannot be avoided through 12.00's commercially reasonable efforts. Within fifteen (15) days of providing notice, TK shall respond to EAO and the Committee with an alternative well location or its position that the proposed well arising out of this section shall be resolved as set forth in Article 11 of this Agreement.
- (f) Mining Operations. EAO will use commercially reasonable efforts to conduct its Mining Operations and planned future operations to give due regard to existing Oil and Gas Operations and plans of development of TK, including, but not limited to, scheduling its mine phases and plans in such a manner as to cause the least practicable disruption to existing and planned Oil and Gas Operations or . Commercially reasonable efforts include, but are not limited to, staging its mining in areas already exploited by TK or determined by TK to be non-economic, thus allowing TK to explore for and develop areas before Mining Operations are commenced, or planning its mine expansions and new pits in areas that would create the least practicable interference with Oil and Gas Operations, consistent with geologic factors and orderly economic development of the Oil Shale reserves.
- (g) Master Area Map Update. EAO shall prepare and submit to TK and file with the Committee on an as-needed basis, an update to the Master Area Map, including the changes by expansion or contraction of Oil Shale Enclaves, Barren Areas and Protective Zones.

- (h) Unitization. EAO may unitize its Leases for cooperative and unit development of Oil Shale resources in its sole and absolute discretion in accordance with the applicable law.
- (i) Damages. EAO will be liable to TK for damages or injury resulting from Unreasonable Interference with Oil and Gas Operations, negligence in conducting Concurrent Development Operations, and breach of the Agreement. Damages shall be limited to actual monetary damages and shall not include incidental or consequential damages.

### 7.2 Oil and Gas Operations.

- (a) General Provisions. Oil and Gas Operations shall be conducted in compliance with applicable law. Further, TK shall conduct Oil and Gas Operations, so far as reasonably practicable, in a manner that will not: (i) cause undue waste to the Oil Shale deposits in the Subject Lands; (ii) cause Unreasonable Interference with the orderly conduct of Mining Operations; or (iii) constitute a hazard to mining equipment and personnel.
- (b) Plans of Operations. As Plans of Operation are developed or modified for the Subject Lands, or as required by a Governing Agency or agreed to by the Parties, TK shall submit to EAO a plan of projected operations contemplated for the period. Plans for operation shall show all existing divided, completed, shut-in, and plugged and abandoned wells, and proposed wells to be drilled. TK agrees to accommodate Mine Plans and Mining Operations so far as reasonably practicable.
- (c) Master Area Map Lipdate. TK shall prepare and submit to EAO and file with the Committee on an as-needed basis, an update to the Master Area Map, including the changes to proposed well locations, surface facilities and pipelines.
- (d) Drilling in Designated Oil Shale Areas. Subject to the terms of this Agreement and applicable law-, TK may drill Exploratory Wells and Development Wells at locations of its choosing in Designated Oil Shale Areas.

## (e) Drilling in Oil Shale Enclaves.

- (i) Development Wells. The drilling of Development Wells in Oil Shale Enclaves is expressly permitted in accordance with well density established by the Governing Agency order or well-location and siting rules, subject to approval of the Governing Agency and the Committee, and to the terms of this Agreement. TK will use commercially reasonable efforts to locate its wells in Barren Areas, within Protective Zones or within Drilling Islands established by the Governing Agency or by agreement of the Parties so long as such efforts do not unreasonably interfere with TK's Oil and Gas Operations or cause it to incur significant or material additional costs.
- (ii) Exploratory Wells. The drillings of Exploratory Wells in Oil Shale Enclaves is expressly authorized, but shall be limited to (a) wells drilled from a Barren Area; or (b) if no Barren Areas are reasonably available, then by

wells drilled from Drilling Islands or at such locations as may be agreed to by the Parties. TK agrees that the protocol for the location and drilling of its wells is first to seek acceptable geologic locations within Barren Areas; then if no Barren Areas are reasonably available, from Drilling Islands established by the Committee or at such locations as may be agreed to by the Parties.

- (iii) Directional Drilling. Except as directed by the Governing Agency, the Parties agree that TK is under no obligation to drill any Directional Well on the Subject Lands and Subject Leases. However, TK agrees to use commercially reasonable efforts to directionally drill its wells in Oil Shale Enclaves either from Barren Areas or from Drillings Islands provided drilling directionally would not cause it to incur agnificant or material additional costs.
- (f) **Drilling Fluid.** TK agrees to use a drilling medium through the EAO Leaseholds and continguous oil shale resources within one thousand five hundred (1,500) feet of the surface that will minimize the Oil Shale from dissolving in solution and that will not cause unreasonable waste, or otherwise cause Omeasonable Interference with existing or possible future Mining Operations or processing of Oil Shale deposits. TK agrees to add other admixtures deemed by the Committee and current practice to be reasonably necessary for the protection of the Oil Shale or in overcoming associated problems, it being the intention of the Parties to prevent enlarged drill holes.
- (g) Drilling in Compliance with Plan of Development. TK will use commercially reasonable effort to plan its development and locate and drill its wells so as to give due regard to existing Mining Operations and plans, including, but not limited to, scheduling its prorities for drilling and development in such a manner as to cause the least disruption to active and planned Mining Operations. Commercially reasonable efforts include, but are not limited to, coordinating the drilling to commence in areas already mined by EAO, allowing EAO to mine through areas before oil and gas drilling operations are commenced, or drilling in areas that would create the least practicable interference to Mining Operations, consistent with geologic factors and orderly and economic development of the oil and gas reserves.
- (h) Existing Geophysical Information. TK agrees that EAO may review, on a confidential basis, all existing proprietary geophysical information and data owned by TK from the surface of the Subject Lands to the depth of one thousand (1,000) feet or the bottom of the Oil Shale formation, whichever is deeper. Such review shall be at EAO's sole cost.
- (i) Well Logs. TK agrees to provide, on a confidential basis, any gamma ray-neutron, gamma ray-sonic, or other Well Logs it runs through the Oil Shale geologic zones in the Subject Lands from the surface to the depth of one thousand (1,000) feet, or the bottom of the Oil Shale formation, whichever is deeper. In addition, EAO may have a representative present at the location of each new well drilled on the Subject Lands for the purpose of reviewing and sampling drill cuttings from the surface to the depth of one

thousand (1,000) feet, or the bottom of the Oil Shale formation, whichever is deeper. Such review and sampling shall be at EAO's and it representative's sole risk and cost.

- (j) Casing Program. In addition to the requirements of applicable law pertaining to well casing requirements, TK agrees to set well casing from the top of the Oil Shale zones or sections through the entire geologic zone of all Oil Shale deposits to a maximum depth of the geologic zone. Cement used in setting the casing or in plugging a well which comes in contact with the Oil Shale geologic zones shall be of a chemical composition designed to minimize dissolution or other impairment of the Oil Shale.
- (k) Dry Holes. If a well is determined to be a dry hole. TK agrees to place cement plugs at least one hundred (100) feet across the top and the base of the Off Shale geologic zones identified by EAO to a maximum depth of the geologic zone and across any oil, gas, or water shows or as directed by the Governmental Agercy. It shall set plugs inside a properly cemented casing string. No well will be temporarily abandoned with an open hole in the Oil Shale geologic zone unless other wise agreed to by the Parties.
- (l) Unitization. TK may unitize its Leases for cooperative development of the oil and gas deposits, in its sole and absolute discretion in accordance with applicable law.
- (m) Damages. TK will be liable to EAO for damages or injury resulting from undue waste of Oil Shale deposits. Undue Interference with Mining Operations, negligence in conducting Concurrent Operations, and breach of this Agreement. Damages shall be limited to actual menetary damages and shall not include incidental or consequential damages.

## ARTICLE 8. INFORMATION EXCHANGE

8.1 **General Provisions.** The Parties agree to provide to the Committee the original or photocopies of all Exchange Information and other relevant information to enable the Committee to make informed judgments regarding their respective operating intentions and plans. The Parties agree to maintain the confidentiality of all Exchange Information and other information designated as such by a Party- in accordance with Section 12.6.

### ARTICLE 9. LIMITATION ON LIABILITY

- 9.1 Extra Costs. Each Party shall bear the costs of conforming operations to Concurrent Development Operations, including but not limited to, the costs of admixtures to drilling fluids; well casing, cementing, and plugging requirements in connection with Oil and Gas Operations; and any modifications to Mine Plans for Mining Operations.
  - (a) Associated Costs of Compliance by TK. TK agrees to bear all operational costs in excess of normal and customary operating costs for oil and gas wells drilled which are

designed to protect or mitigate interference with or damage to the Oil Shale deposit as a cost of the privilege of conducting coordinated Concurrent Development Operations. Such additional costs shall include, but are not limited to, costs for drilling fluid admixtures, deferral of operations, well casing and cementing programs, and plugging and abandoning programs.

- (b) Associated Costs of Compliance by EAO. EAO agrees to bear all operational costs in excess of normal and customary operating costs for Mining Operations which are designed to protect or mitigate interference with or access to the oil and gas deposits as a cost of the privilege of conducting coordinated Concurrent Development Operations. Such additional costs shall include, but are not limited to, additional surveys, special equipment and deferral of operations, Protective Zones, costs of determining Oil Shale Enclaves, and additional monitoring equipment and personnel.
- 9.2 Costs of Suspending or Deferring Operations. Each Party shall bear its own costs of suspension of Lease terms and Deferred Operations directed by the Governing Agency or by agreement of the Parties, including, but not limited to. (a) costs of relocation, removing, or storing surface equipment; (b) placing mining facilities in care-taker status; and (c) mobilizing equipment and personnel for state-up of operations at the end of the period of Deferred Operations.
- 9.3 Costs of Relocating, Removing, and Storing Equipment and Facilities Not Associated with Deferred Operations. Each Party shall bear its own costs of relocating, removing, and storing equipment and facilities under circumstances not amounting to suspension of lease terms and Deferred Operations.
- 9.4 Costs of Loss of Mineral Resources. The Parties agree that minerals left in place either in Protective Zones or by virtue of inability to access deposits to accommodate the operations of the other shall be deemed acceptable waste for the period of Deferred Operations, or as other wise agreed by the Parties.

## ARTICLE 10. INDEMNITY

Indemnity and Agreement to Hold Harmless. TK agrees to indemnify and to defend and hold EAO, its officers, employees, contractors, subcontractors, and agents, harmless for, from, and against any and all claims, damages, judgments, losses, and expenses, including attorney fees, arising out of or resulting from, directly or indirectly, TK's negligence in failing to comply with the additional operating requirements necessary to implement and comply with this Agreement. Reciprocally, EAO agrees to indemnify and to defend and hold TK, its officers, employees, contractors, subcontractors, and agents, harmless for, from, and against any and all claims, damages, judgments, losses, and expenses, including attorney fees, arising out of or resulting from, directly or indirectly, EAO's negligence in failing to comply with the additional operating requirements necessary to implement and comply with this Agreement. This indemnity shall apply to

damage to, or loss of, materials, tools, and equipment owned or supplied by the Parties, their officers, employees, contractors, subcontractors, and agents or supplied by a third party and used in normal and customary operations. This indemnity shall survive the termination of this Agreement so long as the incident for which indemnity is sought occurred during the term of this Agreement, and shall continue thereafter so long as either Party is subject to any possible claim or threatened, pending, or completed action, suit or proceeding, whether civil, criminal, or investigative.

10.2 Special Environmental Indemnity. Each Party will indemnify and hold the other, its officers, employees, contractors, subcontractors, and agents, harmless for, from, and against any claims or injuries directly or indirectly arising out of the indemnifying Party's operations attributable to: (a) the use, generation, manufacture production, storage, release, threatened release, discharge, disposal, or presence of a hazardous substance or hazardous or toxic material (as defined by all applicable environmental laws) on, under, or about the Subject Lands; (b) the violation of any environmental laws; (c) any claim, inquiry, investigation, or proceeding relating to any environmental conditions on or about the Subject Lands; (d) any other environmental contamination of the Subject Lands or adjacent property; and (e) any remedial work required by the applicable environmental laws. This indemnification obligation reludes, without limitation, all consequential damages, and the costs of any required of necessary investigation, analyses, repair, cleanup, remediation, detoxification testing or monitoring of the Subject Lands and the preparation and implementation of any closure, remedial, or other required plans. This indemnity shall survive the ermination of this Agreement and shall continue thereafter so long as either Party is an jeet to any possible claim or threatened, pending, or completed action, suit of proceeding, whether civil, criminal, or investigative, regarding the health, industrial hygiene, or environmental conditions on, under, or about the Subject Lands.

# ARTICLE 11. DISPUTE RESOLUTION

- Resolution by Technical Coordinating Committee. At any time it appears to any Committee member or to any Party that there is an existing or potential conflict with respect to the performance of obligations under this Agreement, the Committee member or the Party may call a meeting of the Committee to consider and attempt to arrive at a satisfactory resolution of the conflict. If the conflict is resolved to the satisfaction of the Committee and the Party involved, a written memorandum of resolution shall be made and signed by the Parties or their representatives.
- 11.2 **Dispute Resolution.** The Parties acknowledge that in the event a dispute cannot be resolved by the Committee or the Parties SITLA and the Board of Oil, Gas and Mining have jurisdiction to participate in dispute resolution depending upon the nature of the dispute between the Parties.

#### ARTICLE 12. MISCELLANEOUS PROVISIONS

- 12.1 Effective Date. This Agreement shall become effective as of the date first written above.
- 12.2 **Headings.** The headings of the Agreement are for reference only and will not limit or define the meaning of any provision of the Agreement.
- 12.3 Counterparts Authorized. This Agreement may be executed in multiple counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same Agreement.
- 12.4 **Termination of Agreement.** Except as otherwise provided, this Agreement shall terminate upon the first to occur of: (a) the termination of all or one Party's Leases; (b) completion of the operations of one or both of the Parties; or (c) by written agreement of the Parties.
- Notices. Notices from any Party to the other or to the Committee shall be in writing and shall be deemed to have been given when hand delivered or when (a) deposited in the United States mail, certified mail, postage prepaid, addressed to the recipient Party; or (b) transmitted by express delivery service delivery guaranteed, freight prepaid. The date notice is deemed to be effective shall be the date on which the notice is actually received.

The addresses for notification are:

T-K Production Company (or its Committee member) 2812 1<sup>St</sup> ve North Suite 408
Billings MT 59101

Attn: Thomas M. Hauptman, President

Office Number: (406) 259-8480 Facsimile Number: (406) 259-2124

EAO State Leases, LLC c/o Enefit American Oil Co. 307 West 200 South Suite 4005 Salt Lake City, UT 84101

Attn: Rikki L. Hrenko, Manager

Office Number: (801) 363-0206

Confidentiality. The Parties shall keep the Exchange Information and other information designated as confidential in strict confidence, and shall not disclose it to any other person or entity or use it for any purpose other than for the specific scope of this Agreement without the prior written consent of the other. All confidential information shall remain the property of the Party who developed it; and as to information jointly developed by the Committee, the joint property of the Parties. Both Parties shall protect and safeguard the Exchange Information and shall prevent the unauthorized use, dissemination, or publication of the information. All Exchange Information and any other confidential information stamped "confidential" and shall be treated as confidential by the Parties unless it was lawfully in the possession of the receiving Party prior to disclosure, has become part of the public record at the Governing Agency or part of the public domain, was received by a Party from another source which has not breached any confidentiality requirement, or is compelled to be disclosed by law.

Upon termination of this Agreement or upon the disclosing Party's request, all Exchange Information and all records, any compositions, articles, documents and other items which contain, disclose and/or embody any confidential information (including, without limitation, all copies, reproductions, summaries and notes of the contents thereof), shall be returned to the disclosing Party or destroyed by the receiving Party, and the receiving Party will certify that the provisions of this paragraph have been complied with.

- 12.7 Amendment by Agreement. This Agreement may not be supplemented, modified, or amended except by a written agreement signed by a duly authorized representative of each Party.
- 12.8 Agency. This Agreement shall not be construed to create, either expressly or by implication, the relationship of agent and principal, joint venturers, mining partners or general partners between or among the Parties. No Party is authorized to act on behalf of the other Party on any matter related to the subject matter of this Agreement.
- 12.9 Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the Parties and their respective successors and assigns.
- 12.10 Construction of Agreement. No rule of strict construction shall be applied with respect to this Agreement against any Party to the Agreement. Whenever possible, each provision shall be interpreted in a manner to be valid under applicable law. However, if any provision is held to be prohibited by or invalid under applicable law, such provision will be ineffective only to the extent of such prohibition or invalidity, and this Agreement shall not be deemed void as the result of any of its individual provisions being deemed invalid.
- 12.11 Governing Law. This Agreement shall be governed by the laws of the State of Utah without giving effect to the conflict of laws principles.
- 12.12 Conflict with Applicable Law. In the event any term or provision of this Agreement conflicts with applicable law, applicable law shall control.

12.13 Entire Agreement. This Agreement constitutes the entire agreement between the Parties pertaining to its subject matter. All prior and contemporaneous agreements, representations, and understandings of the Parties, oral or written, pertaining to the subject matter are superseded by and merged in the Agreement.

T-K PRODUCTION COMPANY

EAO State LEASES, LLC

Thomas M. Hauptman

President

Rikki L. Hrenko Manager

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## EXHIBIT A LEGAL DESCRIPTION

Attached to and made a part of Cooperative Development Agreement between T-K Production Company and EAO State Lease, LLC, covering lands in Uintah County, Utah

State of Utah oil and gas leases are numbered and T-K Production Company is Lessee.

Following tracts of land are all in:

Township 9 South, Range 25 East, SLB&M

Section 19: S1/2

being Part of State ML-52859

Section 28: S½

being Part of State ML 52861

Section 30: Lots 1 thru 15, N1/2NE1/4 SE

(All less Mining Claims)

being State ML-52863

Section 31: Lots 1, 2, 3, SW1/4, NW1/4, S1/2

(Lots aka Ka NONE, part of

SENE

being State ML-52864

TE: Dif Shale lease is "less Mining claims"

Section 32: ots thru 10, SE1/4NW1/4, SW1/4,

N½SE¼ (All less Mining Claims)

being State ML-52865

being State ML-52866

Section 33: Lot 1, NW1/4NW1/4

(Lot aka part of SW1/4NW1/4)

NOTE: Oil Shale lease is "less Mining claims"

Section 33: Lots 2, 3, 4, 5, NE14, E1/2NW1/4

(Lots aka part of N/2S/2)

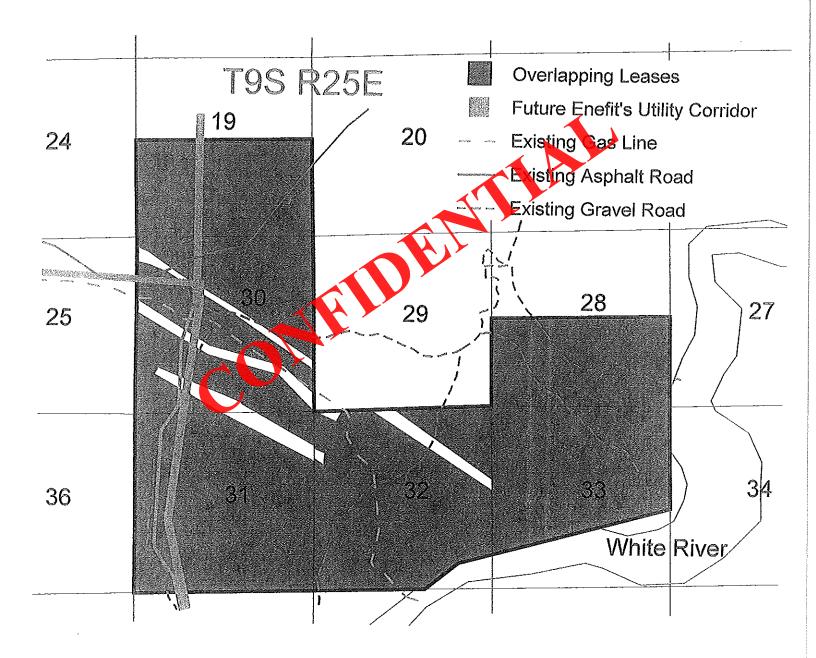
and further less Mining Claims

and less River in S/2SE

currently in Enduring lease - will be

T-K lease in August 2014

**Exhibit B**Master Area Map



#### COOPERATIVE AGREEMENT FOR CONCURRENT

#### MINING AND OIL AND GAS OPERATIONS

THIS AGREEMENT is entered into this 24th day of April, 2014, by and between T-K Production Company ("TK"), PO Box 2235, Billings, Montana 59103, and Retamco Operating Inc, PO Box 790, Five Pepsi Drive, Red Lodge, Montana 59068 ("ROI"), (individually a "Party" and collectively the "Parties"), who in consideration of mutual promises agree as follows:

# ARTICLE 1. PARTIES AND OPERATIONS

- 1.1 TK is a Montana corporation licensed to do business in Utah. TK owns and operates Oil, Gas and Associated Hydrocarbons Leases issued by the Utah School and Institutional Trust Lands Administration ("TLA") and conventional oil and gas wells on the Subject Lands (to this Agreement), and will be conducting future Oil and Gas Operations thereon.
- 1.2 ROI is a Montana corporation Reensed to do business in Utah. ROI owns Bituminous-Asphaltic Sands Leuses issued by TLA and will be developing Bituminous Sands mines on the Subject Lands (to this Agreement), and will be conducting future Mining Operations thereon

## ARTICLE 2. PURPOSES

- 2.1 Coordinated Operations. Applicable laws and Lease terms require Multiple Use of the Subject Lands (to this Agreement) and expressly provide for the concurrent or simultaneous exploration and extraction of the Respective Mineral Resources from the Subject Lands. The Parties recognize and understand that occasional operational conflicts are inevitable. The Parties therefore agree that cooperation and coordination of their Concurrent Development Operations and orderly resolution of conflicts is essential to the commercial viability of their respective Leases and the maximum ultimate recovery of their Respective Mineral Resources in an expeditious and economical manner consistent with principles of Multiple Use and this Agreement. The primary purposes of the Agreement are to: (a) address and protect the relative rights of the Parties in a cooperative manner; (b) protect the safety and health of all personnel; (c) protect the Respective Mineral Resources and other natural resources from damage, injury and waste; and (d) provide for Concurrent Development Operations.
- 2.2 Maximum Ultimate Economic Recovery. TK and ROI desire to protect their relative rights to develop their Leases and enjoy their Leaseholds and surface rights in a

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cooperative, coordinated and harmonious manner that will comply with applicable law and result in the maximum ultimate economic recovery of their Respective Mineral Resources with minimum waste and conflicts.

- 2.3 **Protecting Personnel, Equipment, and Resources**. TK and ROI agree that a paramount consideration of the Parties while conducting Concurrent Development Operations is protecting life, limb, property and other natural resources from damage and injury while achieving the maximum ultimate economic recovery of their Respective Mineral Resources.
- 2.4 Protecting the Surface Estate. The Parties agree to conduct their operations in a manner that will minimize damage to surface resources consistent with their respective rights to use so much of the surface as reasonably necessary to explore for, mine and develop, remove and process their Respective Mineral Resources, recognizing that: (a) ROI's Mining Operations will involve surface and or underground mining of Bituminous Sands as well as onsite processing and disposal of the processed sand, fines, overburden and other waste rock; (b) the drilling of Directional Wells by TK can significantly increase the time and costs to successfully drill and complete each well, and in some cases the drilling of a replacement well at a different surface location to achieve the target objective.
- 2.5 Expectations of Parties TK and KOI, by entering into their respective Leases, contemplated present rights to explore for, produce, and remove their Respective Mineral Resources. The Parties agree to address and use their best efforts to coordinate activities and to timely address operational conflicts. The Parties also agree to make reasonable efforts to conduct their operations and resolve their disputes in a manner that will allow Concurrent Development Operations of the overlapping Leasehold estates. It is therefore agreed that among the possible alternative procedures for Concurrent Development Operations, deferring operations of one Party in favor of another should be a method of last resort and shall be utilized only upon agreement of the Parties or by a rule, order or directive of a Governing Agency.
- 2.6 Interference and Some Delays Anticipated. In the spirit of coordinated and cooperative Concurrent Development Operations, TK and ROI recognize that some operational interference, inaccessibility to, and delays involving portions of their Respective Mineral Resources may be inevitable. The Parties therefore confirm their understanding and agree that reasonable interference, and limited inaccessibility to and delays involving portions of their Respective Mineral Resources are the quid pro quo to facilitate present contemporaneous mineral development operations.

## ARTICLE 3. DEFINITIONS

3.1 Critical Terms. In addition to terms defined in other articles to this Agreement, the following definitions shall control this Agreement:

- (a) "Active Mining Operations" shall mean all projected operations for the extraction of Bituminous Sand ores within an approved Mine Plan over a two year period.
- (b) "Barren Areas" shall mean those areas contained within a Bituminous Sands Enclave deemed or believed to be barren of Mineable Reserves, including areas in which the reserves have already been mined-out.
- (c) "Bituminous Sands" shall mean rock and sand impregnated with heavy oil, bitumen or asphalt and is synonymous with the term "tar sands".
- (d) "Bituminous Sands Enclaves" shall mean those lands within a Designated Bituminous Sands Area subject to Active Mining Operations in one or more tar sands ore zones or areas not presently being mined but which contain proven mineable reserves of Bituminous Sands.
- (e) "Casing Program" shall mean the special requirements for casing a wellbore which are imposed by applicable law of this Agreement to protect mineral bearing formations of one Party form willing, perfaction, or production operations of another.
- (f) "Cement Bond Log" shall mean that log run to test the quality of the cement-to-casing bond around cemented casing of a well.
- (g) "Concurrent Development Operations" shall mean the right of TK and the right of ROI to conduct mineral extraction operations and related activities in close proximity on the Subject Lands, and on overlapping Leases, at the same time.
- (h) "Deferred Operations" shall mean that circumstance when, either by agreement of the Parties or by direction of a Governing Agency, one of the Parties suspends and defers its operations in any particular area of the Subject Lands for a period not to exceed two (2) years in favor of the other Party's operations continuing on the same area of the Subject Lands.
- (i) "Designated Bituminous Sands Areas" shall mean those areas designated by agreement of the Parties or the Governing Agency as areas targeted for mining of Bituminous Sands under a current Mine Plan.
- (j) "Development Well" shall mean a well drilled to a known producing formation in a previously discovered field, as distinguished from an Exploratory Well.
- (k) "Directional Well" shall mean a well in which the wellbore departs materially from the vertical.

- (l) "Drilling Island" shall mean that geographic area designated for the drilling of:
  (i) vertical wells from authorized surface locations; and (ii) one or more
  Directional Wells designated to bottom hole under lands for which no surface
  locations are available either by agreement of the Parties, or because of surface
  conditions, or surface occupancy prohibitions contained in lease or operating
  stipulations promulgated by the Governing Agency.
- (m) "Exchange Information" shall mean any and all documents; geologic, geographic, or other maps or plats; cross-sections; Mine Plans; plans of operations; surveys; correspondence; oral communications; consultant reports; technical reports: notices; permits; or update to any document required by this Agreement or by rules of the Governing Agency to be exchanged or to be submitted to the Committee; or any such document voluntarily exchanged or shared with a Party or the Committee.
- (n) "Exploration" shall mean in the tar sands context, those operations connected with locating the presence of economic denosits of tar sands and establishing their nature, shape, depth, and grade, including geological surveys, geophysical prospecting, boreholes and trial pits, headings, drifts or tunnels. In the conventional oil and gas context, Exploration shall include aerial surveys, geophysical surveys, geophysical surveys, geological studies, core testing, and drilling of Exploratory Wells.
- (o) "Exploratory Wen chall mean an oil and gas well drilled greater than one (1) mile from well producing in commercial quantities from a pool or common source or supply or a well drilled with the expectation of extending the known limits of an oil and gas field already partly developed.
- (p) "Governing Agency" shall mean TLA, the Utah Division of Oil, Gas and Mining or other state or federal administrative agencies having leasing, regulatory or operational jurisdiction over the conduct of the Parties. There may be circumstances when one or more state or federal agency may have concurrent jurisdiction over the leasing, regulatory or operations of the Parties.
- (q) "Leases" or 'Leaseholds" shall mean collectively those certain Oil, Gas and Associated Hydrocarbon Leases issued to TK by TLA and covering the Subject Lands and those certain Bituminous-Asphaltic Sands Leases issued to ROI by TLA and covering the Subject Lands, and any extensions or renewals thereof (collectively referred to in this Agreement as the "Subject Leases").
- (r) "Mine Plan" shall mean the pre-design of the detailed layout, main roadways, and workings of a mine; including, but not limited to, the general description of the geologic conditions, mineral analysis, pit and overburden areas, reserve analysis, basic mining equipment, phases of mining, timeframe for development and such other data as might be required by the Governing Agency to be submitted for approval of Mining Operations. The Mine Plan shall be construed

- as the official document or permit initiating Mining Operations on the Subject Lands.
- (s) "Mining Operations" shall mean actual mining activities directed to the severance, removal, processing and transportation of Bituminous Sands ore and bitumen and associated overburden and interburden. For purposes of this Agreement, Mining Operations shall not include Exploration.
- (t) "Multiple Use" shall mean, as between the Parties, conducting Mining Operations and Oil and Gas Operations in a harmonious and coordinated manner that takes into account: (i) the expectations of each Party to present enjoyment of its Leasehold estate; (ii) the relative economics of the Parties; and (iii) the relative mobilization, planning, and operational needs of each Party without undue impairment to the productivity and operations of the other.
- (u) "Oil and Gas Operations" shall mean all activities directed to the drilling for, production, processing, and transportation of oil and gas, including actual staging, dirt work and drilling operations. Oil and Gas Operations shall not include geophysical activities conducted prior to drilling for oil and gas.
- (v) "Protective Zone(s)" shall mean an area of the surface and the underlying Bituminous Sands ore left in place on the Subject Lands to serve as a Protective Zone for existing and future Oil and Gas Operations being conducted during Concurrent Development Operations.
- (w) "Respective Mineral Resources" shall mean (i) for TK, the recoverable oil, gas and associated hydrocarbons described and covered under its Leases; and (ii) for ROI, the recoverable bitumen and associated minerals described and covered under its Leases.
- (x) "Subject Lands" shall mean those lands subject to this Agreement described in Exhibit "A" attached hereto, as may be amended from time to time, to include all lands within, and subject to, agreements, overlapping Leases, conveyances, or other instruments of each Party affecting real property and stratigraphic geologic intervals within those lands.
- (y) "Unreasonable Interference" shall mean interference in excess of that anticipated interference necessarily or appropriately interposed in the spirit of cooperative and coordinated development of the Respective Mineral Resources, it being understood that some delay resulting from the operations of the other Party may be both necessary and appropriate.
- (z) "Well Logs" shall mean those electrical, gamma ray-neutron, sonic, or appropriate logs run by TK to identify the stratigraphic bottoms and tops of geologic formations or stratigraphic intervals.

3.2 Undefined Terms to Conform and Applicable Law. All undefined terms used in this Agreement shall have the meaning customarily used in the mining and oil and gas industries unless the applicable term is defined by statute or regulation of a Governing Agency, in which case the term shall have the meaning prescribed by the Governing Agency.

## ARTICLE 4. LANDS AND LEASES SUBJECT TO AGREEMENT

- 4.1 Land Description. This Agreement shall apply to the operations of the parties in the Subject Lands described in Exhibit "A" attached hereto and incorporated herein by this reference, all of which are currently located in Uintah County, Utah.
- 4.2 Lease Description. The Subject Lands shall also include the Leases and lands covered by extensions or renewals of the Leases. The Leases shall hereinafter be collectively referred to as the "Subject Leases", which are also described and identified in Exhibit "A" to this Agreement and incorporated herein by reference.
- 4.3 Master Area Map. The Subject Lands and Subject Leases are depicted on the Master Area Map attached to this Agreement as Appendix 1 and incorporated herein by reference.

# ARTICLE 5. FECHNICAL COORDINATING COMMITTEE

- 5.1 Composition of Committee. The Parties agree to establish a Technical Coordinating Committee ("Committee") consisting of at least one representative of TK and at least one representative of ROI; and in the event a Governing Agency is required to be a signatory to any cooperative agreements affecting multiple mineral development conflicts, with the consent of the Parties, one representative of each such Governing Agency.
- 5.2 Purposes of Committee and Venue. The purposes of the Committee shall be to assist the Parties in coordinating their activities and operations by: (a) providing a forum for discussion and to submit Exchange Information regarding the current and proposed operations of each Party; (b) gathering, studying, and disseminating technological data regarding new or improved mining, reclamation and transportation practices and procedures, and oil and gas drilling, completion, production, re-working, plugging and abandoning and transportation practices and procedures that bear on the protection of personnel and equipment and the preservation of all mineral resources subject to this Agreement; and (c) aiding in the resolution of conflicts which may arise between them. All Committee meetings shall be in Billings, Montana unless otherwise agreed by the Parties.

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- 5.3 Master Area Map. In addition to the duties enumerated in this Article, the Committee shall maintain a "Master Area Map" covering the Subject Lands and Subject Leases and prepared by the Parties to which is posted at least once annually by May 1 of each calendar year, all modifications made since the last submittal, including, but not limited to: (a) boundaries of the Subject Lands and existing roads; (b) changes in and to the Subject Leases; (c) the location and size to scale of existing, planned and proposed Bituminous Sands mines, including roads, pits, overburden storage areas, processing plants, workings, facilities and related operations; (d) core hole locations and analysis; (e) the expansion or contraction of Bituminous Sands Enclaves: (f) the contraction or expansion of Barren Areas; (g) the location of all gas compressors, oil load out facilities, pipelines, and operating, plugged or abandoned wells and related roads; and (h) all proposed wells, gas compressors, oil load out facilities, pipelines and related roads. The Master Area map attached to this Agreement as Appendix "1" is the bas line Master Area Map.
- 5.4 Agreement for Plans and Operations. The Committee shall seek to agree on all Mine Plans and Mining Operations, and all oil and gas plans and Oil and Gas Operations, within Bituminous Sands Enclaves, and all amendments to or revisions of those plans and operations. Failure to achieve agreement shall be subject to the procedures for dispute resolution appearing in Article 11.

# ARTICLE 6. MITICATION OF SURFACE IMPACTS

- 6.1 Surface Mining and Oil and Gas Operations.
  - (a) The Parties shall use their best efforts to locate their respective surface mining, underground mining, and oil and gas operations, including roads, pits, dumps, overburden piles, water lines, pipelines, well pads, tanks, compressors and other surface facilities so as not to cause Unreasonable Interference with surface and subsurface operations and to accommodate the existing uses and facilities of the other. Each Party may construct access or mine haulage roads across the common surface estates occupied by the Parties. Plans depicting the location, courses, and distances of such access roads shall be submitted to the Committee not later than thirty (30) days prior to: (i) the time of filing said plans are not required to be filed with the Governing Agency. Protests or objections to the location of proposed roads shall be filed with the Committee within seven (7) days of receipt of the plans. Resolution of conflicts shall be handled as set forth in Article 11 of the Agreement. Operations planned with surface impacts shall also be submitted to the Committee and the Parties in accordance with Section 7.1 by ROI and in accordance with Section 7.2 by TK.
  - (b) Construction and Maintenance of Roads. Any road constructed by a Party for access shall be constructed at that Party's own expense, and the

- constructing Party shall bear all expenses of maintaining and improving the road, except as hereinafter provided.
- (c) Nonexclusive Use of Roads. Use of any road constructed during the term of this Agreement shall be nonexclusive so long as use by the non-constructing Party does not unreasonably interfere with the use and enjoyment of the road by the constructing Party. Furthermore, use constituting more than incidental and occasional use by the non-constructing Party shall entitle the constructing Party to contributions for maintenance and improvement proportionate to the non-constructing Party's use. Resolution of continuing disputes regarding what constitutes occasional or incidental use or a reasonable contribution shall be resolved as set forth in Article 11 of this Agreement.
- 6.2 Surface Improvements and Facilities. Each Party shall conduct its operations in a manner that will not endanger or cause Unreasonable Interference with any existing surface facilities, improvements, workings, or structures made or used in conjunction with the Exploration, drilling for, producing, mining, transportation, storage, processing, or refining of minerals or with the utilization of such facilities, improvements, workings, or structures. Each Party shall conduct its operations in a manner that will not endanger or cause Unreasonable Interference with existing improvements, facilities, structures, and uses of the surface owner or its other lesses and permittees, including farming, ranching or grazing operations, or with the utilization of such improvements, facilities, and structures.
- 6.3 Reclamation. Each Party shall be responsible for all reclamation work arising out of its operations. In areas where two or more Parties utilize the surface for their operations of have improvements, facilities, or structures, each Party will bear its own costs of reclamation, but will cooperate and coordinate to cause any joint reclamation to be accomplished in an expeditious, commercially prudent, and timely manner, and in accordance with the applicable law and rules, orders or directives of the Governing Agency. Costs of joint reclamation will be shared in the same proportion as the cost of reclaiming the specific jointly used road or site bears to each Party's use and operation of the road or site controlled. Failure to agree on reclamation costs shall be subject to the procedures for dispute resolution appearing in Article 11.
- 6.4 Right to Acquire Surface Sites, Roads, and Facilities. Should either Party desire to abandon operations on the Subject Lands or any part thereof prior to termination of this Agreement, the terminating Party shall provide the other with prior written notice of its intentions to abandon operations and offer the non-abandoning Party the right to purchase any surface sites, facilities, equipments, and roads and assume full liability for the continued use, maintenance, and reclamation of such surface sites, facilities, equipment, and roads. Within ten (10) days of receipt of such written notice, the non-abandoning Party shall declare its intentions in writing to acquire all or a portion of the surface sites, facilities, equipment, or roads and agree to assume liability for their continued use, maintenance, and reclamation. Failure to respond within ten (10) days

shall be deemed a rejection of the offer, and the abandoning Party may proceed to remove it facilities and equipment and reclaim its sites.

- 6.5 Environmental: Disposal of Waste Materials. Each Party shall comply with all applicable environmental laws governing disposal of waste materials and shall exercise strict care in handling, transportation, and disposal of waste materials designated as hazardous or toxic by the applicable environmental laws.
- 6.6 **Damages.** Each Party shall be liable to the other for damages arising from Unreasonable Interference with the respective operations caused by surface use.

# ARTICLE 7. MITIGATION OF SUBSURFACE IMPACT

#### 7.1 Mining Operations.

- (a) General Provisions. Mining Operations shall be conducted in compliance with applicable law. Further, ROI shall conduct all Exploration and Mining Operations, so far as reasonably practicable, in a manner that will not: (i) cause undue waste to the oil and gas reservoirs in the Subject Lands; (ii) cause Unreasonable Interference with the orderly Exploration of oil and gas or with Oil and Gas Operations; or (iii) constitute a hazard to oil and gas equipment and personnels in addition to applicable law, ROI agrees to abide by the terms of this Agreement.
- (b) Bituminous Sands Enclaves. ROI may designate Bituminous Sands Enclaves and shall depict such areas on the Master Area Map. ROI shall update the Master Area map periodically as specified in this Agreement indicating the changes by expansion or contraction of Bituminous Sands Enclaves and Active Mining Operations.
- (c) Mine Plans. At least annually on or before May 1 of each year, or at more frequent intervals required by a Governing Agency or agreed to by the Parties, ROI shall prepare or update and submit to TK and to the Committee a Mine Plan projecting the actual mining development contemplated during the period of at least two (2) years. Mine Plans shall include all Bituminous Sands Enclaves and Protective Zones and shall show changes occurring since the last submitted Mine Plan to all mine workings; mined out, reclaimed and abandoned areas; and, new pit developments projected over the specified period. Mine Plans shall also depict the location of all existing, shut-in, and plugged and abandoned wells. TK understands that Mine Plans must be flexible to accommodate unknown underground mining conditions and agrees to cooperate in solving unforeseen problems.

- (d) Protective Zones. ROI shall establish Protective Zones around each existing producing, shut-in, or plugged and abandoned well of a size and dimension required by applicable law. If no applicable law addresses the size and dimension of Protective Zones, each such Protective Zones shall be as agreed by the Parties or as established by a Governing Agency. Protective Zone dimensions may be adjusted from time to time by the Committee to comply with changes in applicable law or to reflect latest known engineering designs. Protective Zones are to be depicted on the Mine Plans and the Master Area Map.
- (e) Distance Limitations. ROI shall mine no closer than one hundred and fifty (150) feet of any existing drilled, completed, or shut-in well pad for which no Protective Zone has been established in its Mine Plan. Further ROI shall give at least ninety (90) days written notice to TK that it will mine within three hundred (300) feet of a proposed well location. Such notice shall include the reason the proposed well location cannot be avoided through ROI's best efforts. Within fifteen (15) days of providing notice, TK shall respond to ROI and the Committee with an alternative well location or its position that the proposed well arising out of this section shall be resolved as set forth in Article 11 of this Agreement.
- (f) Mining Operations. ROI will use its best efforts to conduct its Mining Operations and planned future operations to give due regard to existing Oil and Gas Operations and plans of development of TK, including, but not limited to, scheduling its mine phases and plans in such a manner as to cause the least practicable disruption to existing and planned Oil and Gas Operations. Best efforts include, but are not limited to, staging its mining in areas already exploited by TK or determined by TK to be non-economic, thus allowing TK to explore for and develop areas before Mining Operations are commenced, or planning its mine expansions and new pits in areas that would create the least practicable interference with Oil and Gas Operations, consistent with geologic factors and orderly economic development of the Bituminous Sand reserves.
- (g) Master Area Map Update. ROI shall prepare and submit to TK and file with the Committee annually by May 1 of each year, an update to the Master Area Map, including the changes by expansion or contraction of Bituminous Sands Enclaves, Barren Areas and Protective Zones.
- (h) Oil Company's Right to Mine Access. TK shall have the right to inspect and examine mine operations and facilities to determine ROI's compliance with this Agreement. Notice of TK's intention to inspect and examine ROI's operations shall be made in writing to ROI not less than three (3) business days prior to the proposed inspection date, with copies of such written request being submitted to the Committee. Such right of inspection and examination shall be coordinated through the Committee and shall be accomplished during normal

business hours or other hours acceptable to ROI. ROI shall grant all reasonable requests for inspection.

- (i) Unitization. ROI may unitize its Leases for cooperative and unit development of Bituminous Sands resources in its sole and absolute discretion in accordance with the applicable law.
- (j) Damages. ROI will be liable to TK for damages or injury resulting from Unreasonable Interference with Oil and Gas Operations, negligence in conducting Concurrent Development Operations, and breach of the Agreement. Damages shall be limited to actual monetary damages and shall not include incidental or consequential damages.

#### 7.2 Oil and Gas Operations.

- (a) General Provisions. Oil and Gas Operations shall be conducted in compliance with applicable law. Further, TK shall conduct Oil and Gas Operations, so far as reasonably practicable, in a manner that will not: (i) cause undue waste to the Bituminous Sands deposits in the Subject Lands; (ii) cause Unreasonable Interference with the orderly conduct of Mining Operations; or (iii) constitute a hazard to mining equipment and personnel. In addition to the applicable law, TK agrees to abide by the terms of this Agreement.
- (b) Plans of Operations. At least annually on or before May 1 of each year, or at more, frequent intervals if required by a Governing Agency or by mutual agreement of the Parties, TK shall prepare and submit to ROI a plan of projected operations contemplated for the period. Plans for operation shall show all existing drilled, completed, shut-in, and plugged and abandoned wells, and proposed wells to be drilled. TK agrees to accommodate Mine Plans and Mining Operations so far as reasonably practicable.
- (c) Master Area Map Update. TK shall prepare and submit to ROI and file with the Committee annually by May 1 of each year, an update to the Master Area Map, including the changes to proposed well locations, surface facilities and pipelines.
- (d) **Drilling in Designated Bituminous Sands Areas.** Subject to the terms of this Agreement and applicable law. TK may drill Exploratory Wells and Development Wells at locations of its choosing in Designated Bituminous Sands Areas.
- (e) Drilling in Bituminous Sands Enclaves.
  - (i) Development Wells. The drilling of Development Wells in Bituminous Sands Enclaves is expressly permitted in accordance with well density established by the Governing Agency order or

well-location and siting rules, subject to approval of the Governing Agency and notice to the Committee, and to the terms of this Agreement. TK will use its best efforts to locate its wells in Barren Areas, within Protective Zones or within Drilling Islands established by the Governing Agency or by agreement of the Parties so long as such efforts do not unreasonable interfere with its Oil and Gas Operations or cause it to incur significant or material additional costs.

- Bituminous Sands Enclaves is expressly authorized, but shall be limited to (a) wells drilled from a Barren Area; or (b) if no Barren Areas are reasonably available, then by wells drilled from Drilling Islands or at such locations as may be agreed to by the Parties. TK agrees that the protocol for the location and drilling of its wells is first to seek acceptable geologic locations within Barren Areas; then if no Barren Areas are reasonably available, from Drilling Islands established by the Committee or at such locations as may be agreed to by the Parties.
- (iii) Directional Brilling. Except as directed by the Governing Agency, the Parties agree that TK is under no obligation to drill any Directional Well on the Subject Lands and Subject Leases.

  However, TK agrees to use its best efforts to directionally drill its wells in Bituminous Sands Enclaves either from Barren Areas or from Drilling Islands provided drilling directionally would not cause it to incur significant or material additional costs.
- (f) **Drilling Fluid.** TK agrees to use a drilling medium through the Bituminous Sand zones within one thousand (1,000) feet of the surface that will minimize the Bituminous Sands from dissolving in solution and that will not cause unreasonable waste, or otherwise cause Unreasonable Interference with existing or proposed Mining Operations of Bituminous Sands deposits. TK agrees to add other admixtures deemed by the Committee and current practice to be reasonably necessary for the protection of the Bituminous Sands or in overcoming associated problems, it being the intention of the Parties to prevent enlarged drill holes.
- (g) Drilling in Compliance with Plan of Development. TK will use its best efforts to plan its development and locate and drill its wells so as to give due regard to existing Mining Operations and plans, including, but not limited to, scheduling its priorities for drilling and development in such a manner as to cause the least disruption to active and planned Mining Operations. Best efforts include, but are not limited to, coordinating the drilling to commence in areas already mined by ROI, allowing ROI to mine through areas before oil and gas drilling operations are commenced, or drilling in areas that would create the

- least practicable interference to Mining Operations, consistent with geologic factors and orderly and economic development of the oil and gas reserves.
- (h) Existing Geophysical Information. TK agrees that ROI may review, on a confidential basis, all existing proprietary geophysical information and data owned by TK from the surface of the Subject Lands to the depth of one thousand (1,000) feet. Such review shall be at ROI's sole cost.
- (i) Well Logs. TK agrees to provide, on a confidential basis, any gamma ray-neutron, gamma ray-sonic, or other Well Logs it runs through the Bituminous Sands geologic zones in the Subject Lands from the surface to the depth of one thousand (1,000) feet. In addition, ROI may have a representative present at the location of each new well drilled on the Subject Lands for the purpose of reviewing and sampling drill cuttings from the surface to the depth of one thousand (1,000) feet. Such review and sampling shall be at ROI's and it representative's sole risk and cost.
- (j) Casing Program. In addition to the requirements of applicable law pertaining to well casing requirements, TK arress to set well casing from the top of the Bituminous Sands zones or sections through the entire geologic zone of all Bituminous Sands deposits to a maximum depth of one thousand two hundred (1,200) feet. Cement used in setting the casing or in plugging a well which comes in contact with the Bituminous Sands geologic zones shall be of a chemical composition designed to minimize dissolution or other impairment of the Bituminous Sands.
- (k) Div Holes. If a well is determined to be a dry hole. TK agrees to place cement plugs at least one hundred (100) feet across the top and the base of the Bituminous Sands geologic zones identified by ROI to a maximum depth of one thousand two hundred (1,200) feet and across any oil, gas, or water shows or as directed by the Governmental Agency. TK shall set plugs inside a properly cemented casing string. No well will be temporarily abandoned with an open hole in the Bituminous Sands geologic zone unless otherwise agreed to by the Parties.
- Unitization. TK may unitize its Leases for cooperative development of the oil and gas deposits, in its sole and absolute discretion in accordance with applicable law.
- (m) ROI's Right to Well-Site Access. ROI shall have the right to inspect any oil and gas well-site locations, facilities, and operations to determine TK's compliance with this Agreement. Notice of ROI's intention to inspect and examine TK's operations shall be made in writing to TK not less than three (3) business days prior to the proposed inspection date, with copies of such written request being submitted to the Committee. Such right of inspection and examination shall be coordinated through the Committee and shall be during

- normal business hours or other hours acceptable to TK. TK shall grant all reasonable requests for inspection.
- (n) Damages. TK will be liable to ROI for damages or injury resulting from undue waste of Bituminous Sands deposits, Undue Interference with Mining Operations, negligence in conducting Concurrent Operations, and breach of this Agreement. Damages shall be limited to actual monetary damages and shall not include incidental or consequential damages.

## ARTICLE 8. INFORMATION EXCHANGE

8.1 General Provisions. The Parties agree to provide to the Committee the original or photocopies of all Exchange Information and other relevant information to enable the Committee to make informed judgments regarding their respective operating intentions and plans. The Parties agree to maintain the confidentiality of all Exchange Information and other information designated as such by a Party

#### ARTICLÉ 9. LIMITA VON ON LIABILITY

- 9.1 Extra Costs. Each Party shall bear the costs of conforming operations to Concurrent Development Operations, including but not limited to, the costs of admixtures to drilling fluids; well casing, cementing, and plugging requirements in connection with Oil and Gas operations; and any modifications to Mine Plans for Mining Operations.
  - (a) Associated Costs of Compliance by TK. TK agrees to bear all operational costs in excess of normal and customary operating costs for oil and gas wells drilled which are designed to protect or mitigate interference with or damage to the Bituminous Sands deposit as a cost of the privilege of conducting coordinated Concurrent Development Operations. Such additional costs shall include, but are not limited to, costs for drilling fluid admixtures, deferral of operations, well casing and cementing programs, and plugging and abandoning programs.
  - (b) Associated Costs of Compliance by ROI. ROI agrees to bear all operational costs in excess of normal and customary operating costs for Mining Operations which are designed to protect or mitigate interference with or access to the oil and gas deposits as a cost of the privilege of conducting coordinated Concurrent Development Operations. Such additional costs shall include, but are not limited to, additional surveys, special equipment and deferral of operations, Protective Zones, costs of determining Bituminous Sands Enclaves, and additional monitoring equipment and personnel.

- 9.2 Costs of Suspending or Deferring Operations. Each Party shall bear its own costs of suspension of Lease terms and Deferred Operations directed by the Governing Agency or by agreement of the Parties, including, but not limited to:
  (a) costs of relocation, removing, or storing surface equipment; (b) placing mining facilities in care-taker status; and (c) mobilizing equipment and personnel for start-up of operations at the end of the period of Deferred Operations.
- 9.3 Costs of Relocating, Removing, and Storing Equipment and Facilities Not Associated with Deferred Operations. Each Party shall bear its own costs of relocating, removing, and storing equipment and facilities under circumstances not amounting to suspension of lease terms and Deferred Operations.
- 9.4 Costs of Loss of Mineral Resources. The Parties agree that minerals left in place either in Protective Zones or by virtue of inability to access deposits to accommodate the operations of the other shall be deemed acceptable waste for the period of Deferred Operations, or as other wise agreed by the Parties.

### ARTICLE 10 FYDE MN PY

- 10.1 Indemnity and Agreement hold Harmless. TK agrees to indemnify and to defend and hold ROI, to officers, employees, contractors, subcontractors, and agents, harmless for, from, and against any and all claims, damages, judgments, losses, and expenses, including attorney fees, arising out of or resulting from, directly or indirectly, TK's negligence in failing to comply with the additional operating requirements necessary to implement and comply with this Agreement. Reciprocally, ROI agrees to indemnify and to defend and hold TK, its officers, employees, contractors, subcontractors, and agents, harmless for, from, and against any and all claims, damages, judgments, losses, and expenses, including attorney fees, arising out of or resulting from, directly or indirectly, ROI's negligence in failing to comply with the additional operating requirements necessary to implement and comply with this Agreement. This indemnity shall apply to damage to, or loss of, materials, tools, and equipment owned or supplied by the Parties, their officers, employees, contractors, subcontractors, and agents or supplied by a third party and used in normal and customary operations. This indemnity shall survive the termination of this Agreement so long as the incident for which indemnity is sought occurred during the term of this Agreement, and shall continue thereafter so long as either Party is subject to any possible claim or threatened, pending, or completed action, suit or proceeding, whether civil, criminal, or investigative.
- Special Environmental Indemnity. Each Party will indemnify and hold the other, its officers, employees, contractors, subcontractors, and agents, harmless for, from, and against any claims or injuries directly or indirectly arising out of the indemnifying Party's operations attributable to: (a) the use, generation,

manufacture, production, storage, release, threatened release, discharge, disposal, or presence of a hazardous substance or hazardous or toxic material (as defined by all applicable environmental laws) on, under, or about the Subject Lands; (b) the violation of any environmental laws; (c) any claim, inquiry, investigation, or proceeding relating to any environmental conditions on or about the Subject Lands; (d) any other environmental contamination of the Subject Lands or adjacent property; and (e) any remedial work required by the applicable environmental laws. This indemnification obligation includes, without limitation, all consequential damages, and the costs of any required or necessary investigation, analyses, repair, cleanup, remediation, detoxification, testing or monitoring of the Subject Lands and the preparation and implementation of any closure, remedial, or other required plans. This indemnity shall survive the termination of this Agreement and shall continue thereafter long as either Party is subject to any possible claim or threatened, pending, or completed action, suit or proceeding, whether civil, criminal or hyestigative, regarding the health, industrial hygiene, or environmental conditions on, under, or about the Subject Lands.

## DISTUTE RESOLUTION

- 11.1 Resolution by Technical Coordinating Committee. At any time it appears to any Committee member or to any Party that there is an existing or potential conflict with respect to the performance of obligations under this Agreement, the Committee member or the Party may call a meeting of the Committee to consider and attempt to arrive at a satisfactory resolution of the conflict. If the conflict is resolved to the satisfaction of the Committee and the Party involved, a written memorandum of resolution shall be made and signed by the Parties or their representatives.
- 11.2 Arbitration. Any dispute not resolved by the Committee or the Parties shall be resolved by binding arbitration, unless arbitration can be proven, by the Party so claiming, to be impossible, commercially impracticable, inequitable or materially unsuitable to resolve the particular dispute. Disputes will be arbitrated pursuant to the applicable commercial rules of the American Arbitration Association. The arbitration shall occur in Billings, Montana unless otherwise agreed by the Parties. The Federal Arbitration Act shall apply to the construction and interpretation of the arbitration agreement.
  - (a) Arbitration Panel. An arbitration decision shall be made by the majority vote of three arbitrators selected as provided in this paragraph.
  - (b) Three Person Panel. The panel shall consist of one person each of; (i) a retired judge at the state or federal district court level; (ii) a person with at least ten years experience in mining engineering or geology; and (iii) a

person with at least ten years experience in petroleum engineering or geology. The American Arbitration Association shall submit a list of persons meeting the criteria outlined above for each category or arbitrator, and the Parties shall elect an arbitrator from each category in the manner established by the rules of the American Arbitration Association.

- (c) Fees and Costs. The arbitrators shall award costs and expenses, including reasonable witness fees, to the prevailing Party.
- (d) Attorney's Fees. In any dispute arising under this Agreement, the prevailing Party shall be entitled to reasonable attorneys' fees and costs. It is not necessary for an arbitration or other adjudicatory proceeding to be initiated in order for liability for attorneys' fees under this paragraph to arise.
- 11.3 **Judicial Enforcement.** Any award granted through arbitration and not resolved or concluded by the Committee or the Parties may, at the prevailing Party's option, be submitted to a court of competent jurisdiction in Billings, Montana for enforcement.

# ARTICLE 12. MISCEL AN EQUS PROVISIONS

- 12.1 Effective Date. This Agreement shall become effective as of the date first written above.
- 12.2 Headings. The headings of the Agreement are for reference only and will not limit or define the meaning of any provision of the Agreement.
- 12.3 Counterparts Authorized. This Agreement may be executed in multiple counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same Agreement.
- 12.4 **Termination of Agreement.** Except as otherwise provided, this Agreement shall terminate upon the first to occur of: (a) the termination of all of one Party's Leases; (b) completion of the operations of one or both of the Parties; or (c) by written agreement of the Parties.
- 12.5 Notices. Notices from any Party to the other or to the Committee shall be in writing and shall be deemed to have been given when hand-delivered or when (a) deposited in the United States mail, postage prepaid, addressed to the recipient Party; (b) transmitted by facsimile transmission; or (c) transmitted by express delivery service, freight prepaid. The date notice is deemed to be effective shall be the date on which the notice is actually received.

The addresses for notification are:

T-K Production Company (or its Committee member) 2812 1<sup>St</sup> Ave North Suite 408
Billings MT 59101

Attn: Thomas M. Hauptman, President

Office Number: (406) 259-8480 Facsimile Number: (406) 259-2124

Retamco Operating Inc PO Box 790 Red Lodge, MT 59068

Attn: Joe Glennon, Vice President

Office Number: (406) 446-1658 Ext 103 Facsimile Number: (406) 446-148

Confidentiality. The parties shall keep the Exchange Information and other information designated acconfidential in strict confidence, and shall not disclose it to any other person elentity or use it for any purpose other than for the specific scope of this Agreement without the prior written consent of the other. All confidential information shall remain the property of the Party who developed it; and acto information jointly developed by the Committee, the joint property of the Parties. Both Parties shall protect and safeguard the Exchange Information and shall prevent the unauthorized use, dissemination, or publication of the information. All Exchange Information and other confidential information shall be stamped confidential and shall be treated as confidential by the Parties unless it was lawfully in the possession of the receiving Party prior to disclosure, has become part of the public record at the Governing Agency or part of the public domain, was received by a Party from another source which has not breached any confidentiality requirement, or is compelled to be disclosed by law.

- 12.7 Amendment by Agreement. This Agreement may not be supplemented, modified, or amended except by a written agreement signed by a duly authorized representative of each Party.
- 12.8 Agency. This Agreement shall not be construed to create, either expressly or by implication, the relationship of agent and principal, joint venturers, mining partners or general partners between or among the Parties. No Party is authorized to act on behalf of the other Party on any matter related to the subject matter of this Agreement.

- 12.9 Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the Parties and their respective successors and assigns.
- 12.10 Construction of Agreement. No rule of strict construction shall be applied with respect to this Agreement against any Party to the Agreement. Whenever possible, each provision shall be interpreted in a manner to be valid under applicable law. However, if any provision is held to be prohibited by or invalid under applicable law, such provision will be ineffective only to the extent of such prohibition or invalidity, and this Agreement shall not be deemed void as the result of any of its individual provisions being deemed invalid.
- 12.11 Governing Law. This Agreement shall be governed by the laws of the State of Utah without giving effect to the conflict of laws principles.
- 12.12 Conflict with Applicable Law. In the event any term or provision of this Agreement conflicts with applicable law, applicable law shall control.
- 12.13 Entire Agreement. This Agreement constitutes the entire agreement between the Parties pertaining to its subject matter. All prior and contemporaneous agreements, representations, and understandings of the Parties, oral or written, pertaining to the subject matter are superseded by and merged in the Agreement.

T-K PRODUCTION COMPANY

Thomas M. Hauptinan

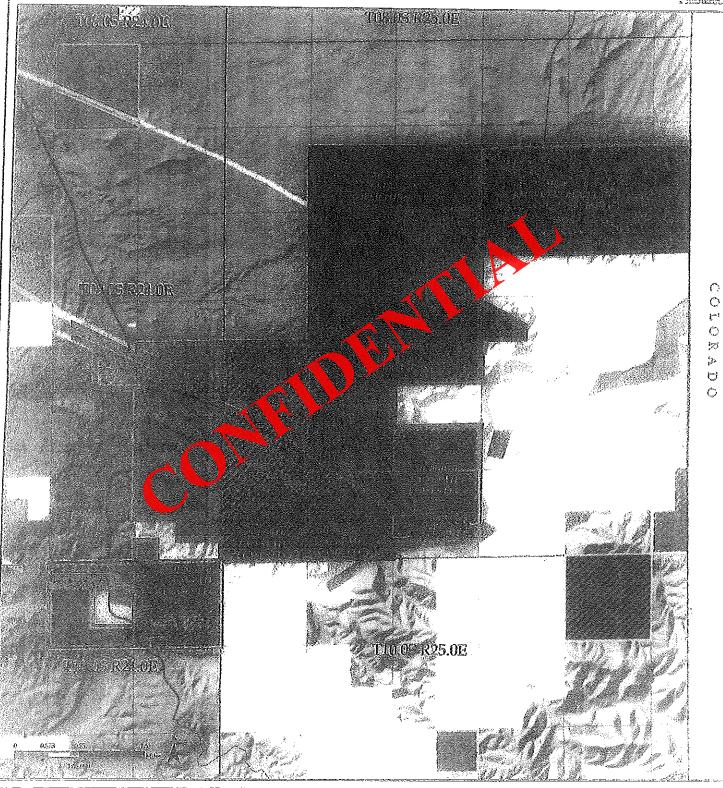
President

RETAMOO OPERATING INC

Joe Glennon Vice President

## Bonanza Oil Shale Block





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Toried Marcal

Lond Own carify and Administration

Date to of Land Management

Private

State Trust Lands (Unitored for Oil State)

Tribil Lands

Una Hammalum uning, Producede 1/8/1284 Unio marti lamo Camma O. The latin (2011 Camiliano Egourne U. D. (1/2017) Zeno (2011, Projectora Transcence Manusco County Boundaries

Trest Lands Active Contracts

Oil and Gas Controcts

Oil Shale Contracts

AMBRE EIVERGY NOUTH AMERICAN, EVC

FRA EAO STATE LEASES LLC

ESS RETAMCO OPERATING INC

PETRO DOME NORTH AMERICA, LLC

Exhibit "A"



Discriptional earlies may be for HEMPICE UM CRIS and family extrins the plantage of the major through the plantage of the major through th

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### T-K PRODUCTION COMPANY

P.O. Box 2235 Billings, MT 59103 (406) 259-8480 Fax (406) 259-2124

April 25, 2014

Joe Glennon, Vice President Retamco Operating Inc PO Box 790 Red Lodge, MT 59068

Re: Cooperative Agreement Bonanza Block

Dear Joe:

Please find enclosed an original copy of the above agreement executed by me as President of T-K Production Company. I sincerely appreciate your help and cooperation in getting this agreement signed. Now if I can just get the other two oil shale companies to follow suit!

On another matter, we are sending the land title information down to our Nebraska attorney to get the ball rolling on the East McMurray water flood. It looks like the earliest we can get on the docket with the Nebraska Oil and Gas Conservation Commission is for the July 2014 hearing. Maps of this flood will be sent to you as soon as I can get the Hoefle's out of vacation mode!

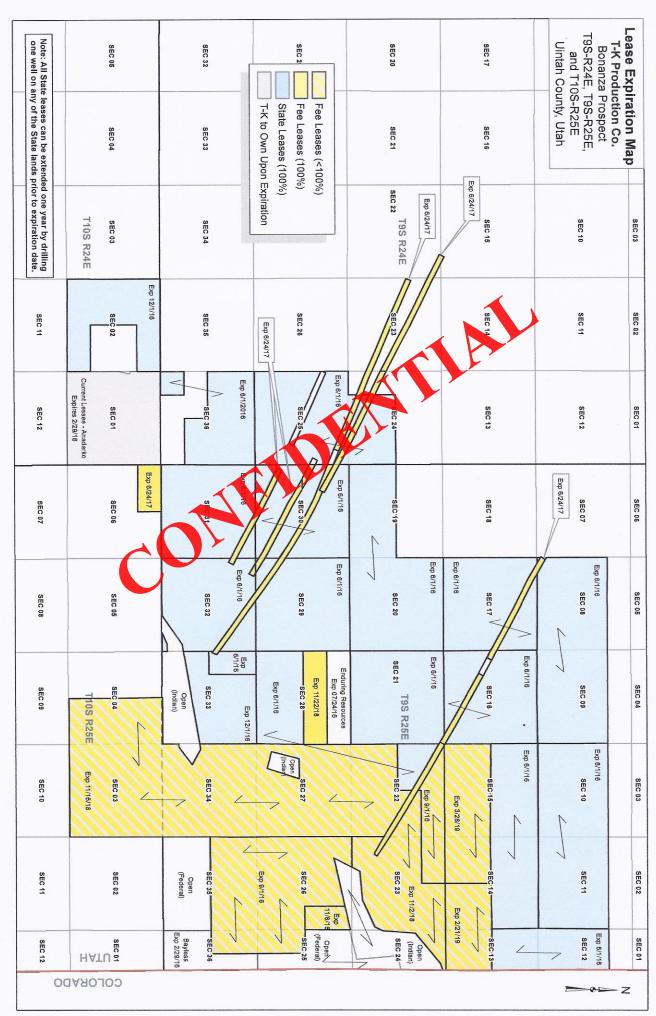
Will be in touch.

Best Regards,

T-K PRODUCTION COMPANY

Thomas M. Hauptman, President

Received: May 27, 2015



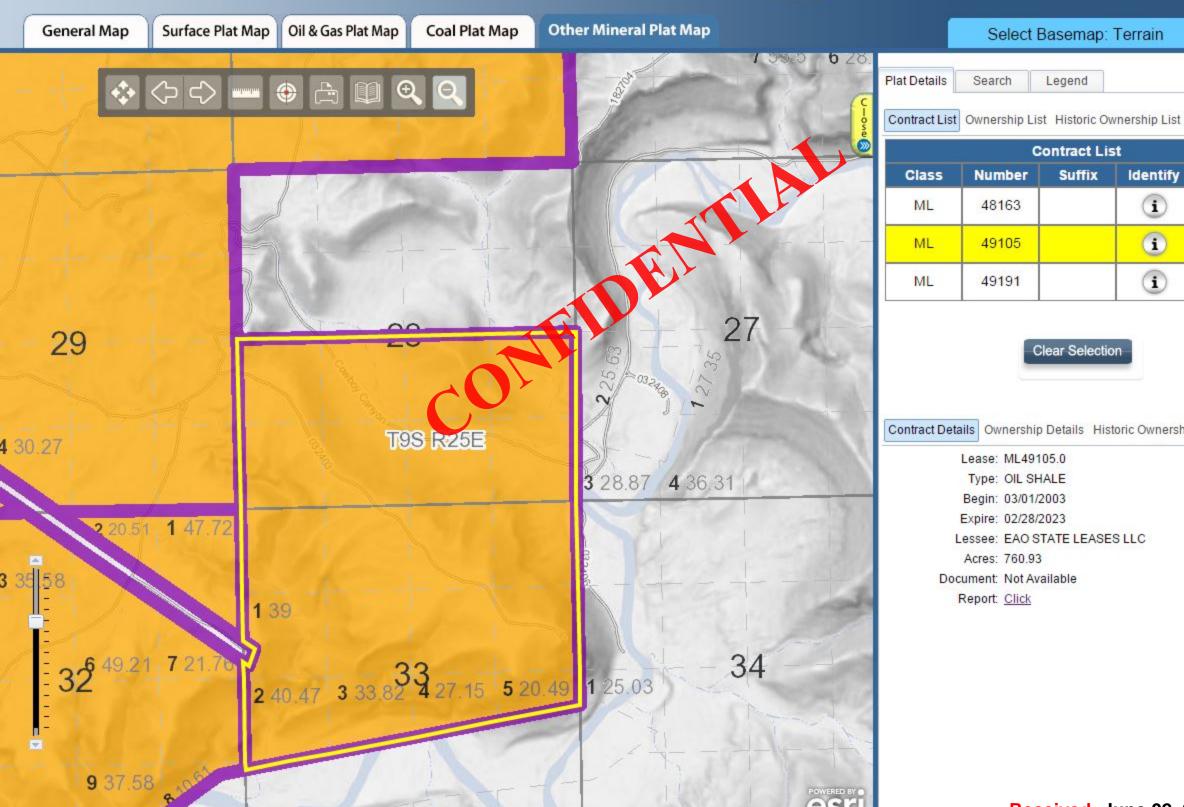
Received: June 02, 2015

# DIGITAL PLAT MAPS

About Help







7 24 50 6 25 20 2 35 81

Contract List						
Class	Number	Suffix	Identify	Мар		
ML	48163		1	<b>Q</b>		
ML	49105		i	<b>Q</b>		
ML	49191		i	<b>Q</b>		

Contract Details Ownership Details Historic Ownership Details

Received: June 02, 2015

#### BOPE REVIEW KGH OPERATING COMPANY State 28 13 43047549840000

Well Name		KGH OPERATING COMPANY State 28 13 43047549		4984	40000			
String		SURF	Prod		ī		]	
Casing Size(")		9.625	5.500		ī		īl .	
Setting Depth (TVD)		1000	7000		ī		īl .	
Previous Shoe Setting Dept	h (TVD)	40	1000		ī		7	
Max Mud Weight (ppg)		9.5	10.5		ī		ī	
BOPE Proposed (psi)		3000	3000		ī		1	
Casing Internal Yield (psi)		5750	4810		ī		]	
Operators Max Anticipated	Pressure (psi)	2900	8.0		i		i	
Calculations		CUDE C4			_	9.625		
Max BHP (psi)		SURF Stri	52*Setting D	enth*MW-	╁			
Max Biii (psi)				cptii WW-	:	494	BOPE Ade	quate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)		Max BH	P-(0.12*Setti	ng Depth)=	t	374	YES	3M annular
MASP (Gas/Mud) (psi)			P-(0.22*Setti		H	274	YES	OK
, , ,					1.5	214	*Can Full	
Pressure At Previous Shoe	Max BHP22*(S	etting Depth -	Previous Sh	oe Depth)=	Ī	283	NO	ОК
Required Casing/BOPE Tes	st Pressure=				ľ	1000	psi	
*Max Pressure Allowed @ ]	Previous Casing	Shoe=			愷	40		sumes 1psi/ft frac gradient
					ä	7		
Calculations		Prod Stri			Ţ	3 500	"	
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MASP (Gas) (psi)		May DII	P (0.12*Se)ti	ng Depth)=	1			quate For Drilling And Setting Casing at Depth?
-		Max BH			H	2982	YES	3M rams, annular
MASP (Gas/Mud) (psi)		Max BH	P-10.23*Septi	ng Deptn)=	11.	2282	*Con Full	Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP22 (S	setting Depth -	Previous Sh	oe Depth)=	1	2502	NO NO	OK
Required Casing/BOPE Tes		<del></del>			H	3000	psi	UN
*Max Pressure Allowed @ 1		Shoe=			H			sumes 1psi/ft frac gradient
					Į.	1000	F ***	8
Calculations		String			Γ		"	
Max BHP (psi)		.0	52*Setting D	epth*MW=	[			
					Ļ		BOPE Ade	quate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)			P-(0.12*Setti		II.		NO	
MASP (Gas/Mud) (psi)		Max BH	P-(0.22*Setti	ng Depth)=	1.		NO	
Pressure At Previous Shoe	M DUD 22*/C	Sattina Danth	Di Ch	D4h)	Ļ			Expected Pressure Be Held At Previous Shoe?
		etting Deptin -	Previous Sil	oe Deptii)=	1.		NO :	
Required Casing/BOPE Tes					1.		psi	1 1/6 6
*Max Pressure Allowed @ Previous Casing Shoe=			IJ.		psi *Ass	sumes 1psi/ft frac gradient		
Calculations		String			Т		"	
Max BHP (psi)		.0	52*Setting D	epth*MW=	Ī			
					ľ		BOPE Ade	quate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)		Max BH	P-(0.12*Setti	ng Depth)=			NO	
MASP (Gas/Mud) (psi)		Max BH	P-(0.22*Setti	ng Depth)=	<u>[</u>		NO	
					I		*Can Full	Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP22*(S	etting Depth -	· Previous Sh	oe Depth)=			NO	
Required Casing/BOPE Tes	st Pressure=				ĮĪ.		psi	
*Max Pressure Allowed @ Previous Casing Shoe=			IF		psi *Ass	sumes 1psi/ft frac gradient		



### State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

#### Permit To Drill

\*\*\*\*\*\*

Well Name: State 28 13

**API Well Number:** 43047549840000

Lease Number: StML 52861 Surface Owner: STATE

**Approval Date:** 6/8/2015

#### **Issued to:**

KGH OPERATING COMPANY, PO BOX 2235, Billings, MT 59103

#### Authority:

Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of R649-3-3. The expected producing formation or pool is the MANCOS Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

#### **Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

#### **Exception Location:**

Appropriate information has been submitted to DOGM and administrative approval of the requested exception location is hereby granted.

#### General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

#### **Conditions of Approval:**

The Application for Permit to Drill has been forwarded to the Resource Development Coordinating Committee for review of this action. The operator will be required to comply with any applicable recommendations resulting from this review. (See attached)

This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon

as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

The operator shall develop and abide by an agreement with the owners of oil shale mineral leases as defined in R649-3-27 (Oil and Gas Conservation General Rules).

Cement volume for the 5 1/2" production string shall be determined from actual hole diameter in order to place cement from the pipe setting depth back to 5000' MD minimum in order to adequately isolate the Castlegate formation.

Surface casing shall be cemented to the surface.

#### **Additional Approvals:**

The operator is required to obtain approval from the Division of Oil, Gas and mining before performing any of the following actions during the drilling of this well:

- Any changes to the approved drilling plan contact Dustin Doucet
- Significant plug back of the well contact Dustin Doucet
- Plug and abandonment of the well contact Dustin Doucet

#### **Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

• Within 24 hours following the spudding of the well - contact Carol Daniels OR

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website

at http://oilgas.ogm.utah.gov

- 24 hours prior to testing blowout prevention equipment contact Dan Jarvis
- 24 hours prior to cementing or testing casing contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program
  - contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well contact Dan Jarvis

#### **Contact Information:**

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voicemail message if the person is not available to take the call):

- Carol Daniels 801-538-5284 office
- Dustin Doucet 801-538-5281 office

801-733-0983 - after office hours

• Dan Jarvis 801-538-5338 - office

801-231-8956 - after office hours

#### Reporting Requirements:

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month
  - Requests to Change Plans (Form 9) due prior to implementation
  - Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
  - Report of Water Encountered (Form 7) due within 30 days after completion
- Well Completion Report (Form 8) due within 30 days after completion or plugging

Approved By:

For John Rogers Associate Director, Oil & Gas

## **Application for Permit to Drill Statement of Basis**

**Utah Division of Oil, Gas and Mining** 

APD No API WellNo Status Well Type **Surf Ownr CBM** 

Unit

10632 43-047-54984-00-00 **LOCKED** OW Surface Owner-APD

**Operator** KGH OPERATING COMPANY

Field WILDCAT Type of Work **DRILL** 

Location SWSW 28 9S 25E S 1036 FSL 971 FWL GPS Coord (UTM) 661157E 4429726N

#### **Geologic Statement of Basis**

Well Name State 28 13

3/22/2016

KGH proposes to set 1,000 feet of surface casing, cemented to surface. The depth to the base of the moderately saline water at this location is estimated to be at approximately 2,700 feet. A search of Division of Water Rights records shows 1 water well within a 10,000 foot radius of the center of Section 28. This well is approximately 2 miles north of the proposed location. Well use is listed a water supply for a man-camp. Depth is listed at 2,000 feet. The surface formation at this site is the Green River Formation and the well probably produces from the Green River Formation. The Green River Formation is made up of interbedded shales, limestones and sandstones. The Green River Formation can be a significant source of useable ground water. This area is probably in a recharge area for the Green River Formation. Production casing cement should be brought up to the base of the moderately saline ground water.

**Brad Hill** 1/6/2015 Date / Time **APD Evaluator** 

#### **Surface Statement of Basis**

Location is in a suspect location and outside the spacing window. Access road enters the pad from the North. The landowner or its representative was in attendance for the pre-site inspection.

The soil type and particularly the topography, combine to pose a significant threat to erosion or sediment/ pollution transport in these regional climate conditions.

Usual construction standards of the Operator appear to be adequate for the proposed purpose as submitted except for some rounding of corner 4 and armoring corners 2 and 8 for erosion control.

I recognize no special flora or animal species or cultural resources on site that the proposed action may harm. The White river can be found to the East and south. The location was not previously surveyed for cultural and paleontological resources (as the operator saw fit). I have advised the operator take all measures necessary to comply with NHPA, ESA and MBTA and that actions insure no improper disturbance to resources that may have not been seen during onsite visit.

The location should be bermed to prevent fluids from entering or leaving the confines of the pad. Fencing around the reserve pit will be necessary to prevent wildlife and livestock from entering. A synthetic liner of 16 mils (minimum) with a felt underlay should be utilized in the reserve pit. Measures (BMP's) shall be taken to protect steep slopes and topsoil pile from erosion, sedimentation and stability issues. A diversion is to be built sufficient to conduct overland or channel flow from over the cutbanks. Care to be taken that diversion of water does not impact or erode topsoil pile or topsoils will need to be stored elsewhere onsite. Corner 4 will need to be rounded to mitigate disturbance to existing road. Down sllope fill slopes are set in drainages and need to be armored with rip rap or other BMP's

Chris Jensen 12/3/2014 **Onsite Evaluator** Date / Time Page 1

No

S

# **Application for Permit to Drill Statement of Basis**

3/22/2016 Utah Division of Oil, Gas and Mining

Page 2

Conditions of Approval / Application for Permit to Drill					
Category	Condition				
Pits	A synthetic liner with a minimum thickness of 16 mils with a felt subliner shall be properly installed and maintained in the reserve pit.				
Surface	Some interim reclamation will be required to put the adjacent road back in service after drilling is complete				
Surface	The well site shall be bermed to prevent fluids from entering or leaving the pad.				
Surface	Measures (BMP's) shall be taken to protect steep slopes and topsoil pile from erosion, sedimentation and stability issues.				
Surface	The reserve pit shall be fenced upon completion of drilling operations.				

Sundry Number: 65328 API Well Number: 43047549840000

	STATE OF UTAH				FORM 9			
ι	DEPARTMENT OF NATURAL RESOUR DIVISION OF OIL, GAS, AND MII	-		5.LEASE DE StML 528	SIGNATION AND SERIAL NUMBER: 61			
SUNDR	Y NOTICES AND REPORTS	ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:				
current bottom-hole depth, i	Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.							
1. TYPE OF WELL Oil Well					8. WELL NAME and NUMBER: State 28 13			
2. NAME OF OPERATOR: KGH OPERATING COMPANY	,			<b>9. API NUME</b> 43047549				
3. ADDRESS OF OPERATOR: PO BOX 2235, Billings, M	T, 59103 406 259-84		NE NUMBER: kt	9. FIELD an	d POOL or WILDCAT:			
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1036 FSL 0971 FWL								
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: SWSW Section: 2	IIP, RANGE, MERIDIAN: 28 Township: 09.0S Range: 25.0E Meri	idian: :	S	STATE: UTAH				
11. CHECI	K APPROPRIATE BOXES TO INDICA	TE NA	ATURE OF NOTICE, REPOR	T, OR OTH	ER DATA			
TYPE OF SUBMISSION			TYPE OF ACTION					
7	ACIDIZE		LTER CASING	☐ ca	SING REPAIR			
NOTICE OF INTENT Approximate date work will start: 8/7/2015	CHANGE TO PREVIOUS PLANS	□ c	HANGE TUBING	Сн	ANGE WELL NAME			
	CHANGE WELL STATUS	□ c	OMMINGLE PRODUCING FORMATIONS	□ со	NVERT WELL TYPE			
SUBSEQUENT REPORT	DEEPEN	□ г	RACTURE TREAT	✓ NE	W CONSTRUCTION			
Date of Work Completion:	OPERATOR CHANGE	□ р	LUG AND ABANDON	☐ PLI	UG BACK			
	PRODUCTION START OR RESUME		ECLAMATION OF WELL SITE		COMPLETE DIFFERENT FORMATION			
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION		IDETRACK TO REPAIR WELL		MPORARY ABANDON			
	TUBING REPAIR		ENT OR FLARE		TER DISPOSAL			
	WATER SHUTOFF				D EXTENSION			
DRILLING REPORT Report Date:			I TA STATUS EXTENSION	r	DEXTENSION			
	WILDCAT WELL DETERMINATION	<u></u>	THER	OTHER:				
	COMPLETED OPERATIONS. Clearly shown costruction on the locatio	n on		Ac Ut Oil, FOR	nes, etc. cepted by the ah Division of Gas and Mining RECORD ONLY gust 12, 2015			
Thomas Hauptman	406 259-8480	BEK	President					
SIGNATURE N/A			<b>DATE</b> 8/5/2015					

Sundry Number: 65328 API Well Number: 43047549840000

STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OU. CAS AND MINING

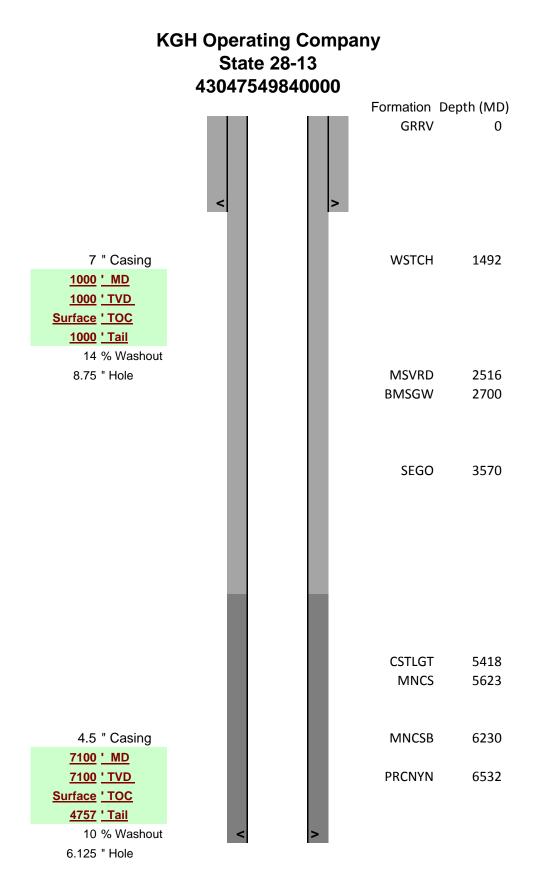
FORM 9

	DIVISION OF OIL, GAS AND M	INING	5. LEASE DESIGNATION AND SERIAL NUMBER:
SUNDR	Y NOTICES AND REPORT	S ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
Do not use this form for proposals to drill drill horizontal I	new wells, significantly deepen existing wells below ou aterals. Use APPLICATION FOR PERMIT TO DRILL	rrent bottom-hole depth, reenter plugged wells, or to form for such proposals.	7. UNIT of CA AGREEMENT NAME:
1. TYPE OF WELL OIL WELL	8. WELL NAME and NUMBER: State 28-13		
2. NAME OF OPERATOR: KGH OPERATING COME	PANY		9. API NUMBER: 4304754984
	Y BILLINGS STATE MT ZIF	PHONE NUMBER: (406) 259-8509	10. FIELD AND POOL, OR WILDCAT: Wildcat
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1036 I		•	соинту: Uintah
QTR/QTR, SECTION, TOWNSHIP, RAN	IGE, MERIDIAN: SWSW 28 9S 2	25E S	STATE: UTAH
11. CHECK APPI	ROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPO	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ALTER CASING CASING REPAIR CHANGE TO PREVIOUS PLANS CHANGE TUBING CHANGE WELL NAME CHANGE WELL STATUS COMMINGLE PRODUCING FORMATIONS CONVERT WELL TYPE  MPLETED OPERATIONS. Clearly show all p	FRACTURE TREAT  NEW CONSTRUCTION  OPERATOR CHANGE  PLUG AND ABANDON  PLUG BACK  PRODUCTION (START/RESUME)  RECLAMATION OF WELL SITE  RECOMPLETE - DIFFERENT FORMATION  ertinent details including dates, depths, volume	SIDETRACK TO REPAIR WELL  TEMPORARILY ABANDON  TUBING REPAIR  VENT OR FLARE  WATER DISPOSAL  WATER SHUT-OFF  OTHER:  s, etc.
ME (PLEASE PRINT) Thomas K	Hohn LHAN	TITLE Designated Agent Date 8/5/2015	

Sundry Number: 65501 API Well Number: 43047549840000

	STATE OF UTAH		FORM 9		
	DEPARTMENT OF NATURAL RESOURC DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: StML 52861		
SUNDF	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:				
Do not use this form for procurrent bottom-hole depth, FOR PERMIT TO DRILL form	7.UNIT or CA AGREEMENT NAME:				
1. TYPE OF WELL Oil Well			8. WELL NAME and NUMBER: State 28 13		
2. NAME OF OPERATOR: KGH OPERATING COMPANY	(		9. API NUMBER: 43047549840000		
3. ADDRESS OF OPERATOR: PO BOX 2235, Billings, M	T, 59103 406 259-848	PHONE NUMBER: 0 Ext	9. FIELD and POOL or WILDCAT: WILDCAT		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1036 FSL 0971 FWL			COUNTY: UINTAH		
QTR/QTR, SECTION, TOWNSI Qtr/Qtr: SWSW Section:	HIP, RANGE, MERIDIAN: 28 Township: 09.0S Range: 25.0E Merio	lian: S	STATE: UTAH		
11. CHEC	K APPROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPOR	RT, OR OTHER DATA		
TYPE OF SUBMISSION		TYPE OF ACTION			
,	ACIDIZE	✓ ALTER CASING	CASING REPAIR		
Approximate date work will start:	✓ CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME		
9/7/2015	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE		
SUBSEQUENT REPORT	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION		
Date of Work Completion:	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK		
	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION		
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON		
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL		
DRILLING REPORT	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION		
Report Date:	WILDCAT WELL DETERMINATION	OTHER	OTHER:		
40 DECORUDE PROPOSED OR		Land and late the late the late a			
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  Change in casing design New casing design: Surface hole: 8-3/4 hole drilled to 1000 ft., set 7", L-80, 23# at 1000 ft, cement with 240 sx, 15.8#, 1.15 ft3/sx, cement to surface, top off if needed. Production hole: 6-1/8 hole drilled to TD (7100), set 4-1/2, L-80, 11.6#, cement with 360 sx, 12.5#, 1.763 ft3/sx, lead and 260 sx 14.3#, 1.236 ft3/sx tail, cement to surface. Pit reduced in size to 25' X 15' X 5'. Pit will be lined with 20 mil liner over geosynthetic felt. Run closed loop system.					
NAME (PLEASE PRINT) Thomas Hauptman	<b>PHONE NUMB</b> 406 259-8480	ER TITLE President			
SIGNATURE		DATE 8/14/2015			

Sundry Number: 65501 API Well Number: 43047549840000



#### KGH Operating Company State 28-13 43047549840000

				1.125			1		1.8			
		Collapse	Collapse		Burst Strength	<b>Burst Load</b>		Tension	Tension	Neutral	Tension	Tension
	MASP	Strength (psi)	Load (psi)	Collapse DF	(psi)	(psi)	Burst DF	Strength (kips)	DF	Point (ft)	Air (kips)	Buoyed (kips)
7 " Casing	374	3830	494	7.76	6340	1000	6.34	435	18.91	855	23.0	19.7
		Internal Crad	Dooluun	Internal	May Chao	CCC \M/t	020		Camant		Comont	
		Internal Grad.	Backup	Internal	Max Shoe	CSG Wt	CSG	000 0 11	Cement		Cement	
	MW (ppg)		Mud (ppg)	Mud (ppg)	Pressure (psi)*	(lbs/ft)	Grade	CSG Collar	Lead (sx)	Lead Yield	Tail (sx)	Tail Yield
	9.5	0.12			2531	23.0	L-80	LTC	240	1.15		
		Collapse	Collapse		Burst Strength	<b>Burst Load</b>		Tension	Tension	Neutral	Tension	Tension
	MASP	Strength (psi)	Load (psi)	Collapse DF	(psi)	(psi)	Burst DF	Strength (kips)	DF	Point (ft)	Air (kips)	Buoyed (kips)
4.5 " Casing	2311	6350	3504	1.81	7780	3873	2.01	212	3.05	5960	82.4	69.4
		Internal Grad.	Backup	Internal	Max Shoe	CSG Wt	CSG		Cement		Cement	
	MW (ppg)	(psi)	Mud (ppg)	Mud (ppg)	Pressure (psi)*	(lbs/ft)	Grade	CSG Collar	Lead (sx)	Lead Yield	Tail (sx)	Tail Yield
	10.5	0.22		1.0	3873	11.6	L-80	LTC	360	1.76	260	1.24

Sundry Number: 65942 API Well Number: 43047549840000

			FORM 9
	STATE OF UTAH DEPARTMENT OF NATURAL RESOUR	CES	
	DIVISION OF OIL, GAS, AND MI		5.LEASE DESIGNATION AND SERIAL NUMBER: StML 52861
SUNDR	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:		
	posals to drill new wells, significantly reenter plugged wells, or to drill horizon n for such proposals.		7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well			8. WELL NAME and NUMBER: State 28 13
2. NAME OF OPERATOR: KGH OPERATING COMPANY	,		9. API NUMBER: 43047549840000
3. ADDRESS OF OPERATOR: PO BOX 2235 , Billings , M	T, 59103 406 259-84	PHONE NUMBER: 80 Ext	9. FIELD and POOL or WILDCAT: WILDCAT
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1036 FSL 0971 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	tip, range, meridian: 28 Township: 09.0S Range: 25.0E Meri	idian: S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICA	TE NATURE OF NOTICE, REPO	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
Approximate date work will start.	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
✓ SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud: 9/3/2015	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
9/3/2015	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
Report Date:			
	WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:
Well SPUD on 9/3/2	COMPLETED OPERATIONS. Clearly show 2015 at approximately 9:30 314 Reported by Jeff Winge 850-9730.	am. Drilling Contractor:	
NAME (PLEASE PRINT) Alexis Huefner	<b>PHONE NUMB</b> 801 538-5302	BER TITLE Office Tech II	
SIGNATURE N/A		<b>DATE</b> 9/3/2015	

Sundry Number: 67518 API Well Number: 43047549840000

			FORM 9		
	STATE OF UTAH		FORM 9		
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: StML 52861		
SUNDF	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:				
Do not use this form for procurrent bottom-hole depth, FOR PERMIT TO DRILL form	7.UNIT or CA AGREEMENT NAME:				
1. TYPE OF WELL Oil Well			8. WELL NAME and NUMBER: State 28 13		
2. NAME OF OPERATOR: KGH OPERATING COMPANY	,		9. API NUMBER: 43047549840000		
3. ADDRESS OF OPERATOR: PO BOX 2235 , Billings , M	T, 59103 406 259-8480	PHONE NUMBER: ) Ext	9. FIELD and POOL or WILDCAT: WILDCAT		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1036 FSL 0971 FWL			COUNTY: UINTAH		
QTR/QTR, SECTION, TOWNSH	<b>HIP, RANGE, MERIDIAN:</b> 28 Township: 09.0S Range: 25.0E Merid	ian: S	STATE: UTAH		
11. CHEC	K APPROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPOR	RT, OR OTHER DATA		
TYPE OF SUBMISSION		TYPE OF ACTION			
	ACIDIZE	ALTER CASING	CASING REPAIR		
NOTICE OF INTENT	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME		
Approximate date work will start:	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE		
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION		
Date of Work Completion:	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK		
SPUD REPORT Date of Spud:	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION		
	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	LI TEMPORARY ABANDON		
✓ DRILLING REPORT	L TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL		
Report Date: 11/5/2015	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION		
11/5/2015	WILDCAT WELL DETERMINATION	OTHER	OTHER:		
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  Please Refer to attached Drilling Report for details. Conductor set 9-3-2015 Surface Casing drilled and set 9-7-2015 Well is currently waiting for evaluation of drilling procedures.  Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY November 05, 2015					
NAME (PLEASE PRINT) Thomas Hauptman	<b>PHONE NUMBE</b> 406 259-8480	ER TITLE President			
SIGNATURE N/A		<b>DATE</b> 11/5/2015			

Sundry Number: 67518 API Well Number: 43047549840000

State 28-13
SWSW Sec 28, T9S-R25E
Uintah County, Utah
43-047-54984
Drilling Report

August 28, 2015

Location construction completed by Craig's Energy Service, Vernal, Utah.

Dress access road with presence of SWAC paleontology monitor.

#### September 3, 2015

ProPetro moves in to drill and set conductor and cellar.

Sets 5 ft diameter celler to a depth of 4 feet, drills 20-inch hole with to a total depth of 40 feet. Sets 16" 0.219 wall thickness conductor at 40 feet, cements with 2.5 yards Class G cement to surface.

#### September 7, 2015

ProPetro drills 8-3/4 hole with air hammer to a total depth of 1015 feet.

ProPetro sets 1003 feet,7-inch, P110, 23#, cements with 240 sx, 15.8 # Class G, no cement returns to surface, top off with 60 sx, 15.8# Class G, returns to surface but cement falls. Wait 1 hour top off with 100 sx 15.8# Class G, cement to surface and holds at surface.

Sundry Number: 67518 API Well Number: 43047549840000

September 12, 2015

Cameron tacks steel plate across top of surface casing. Wait for drilling rig.

#### NOTE:

Once the drilling rig is on location reports will be delivered on a daily basis.

Prepared and Submitted by:

Jeff Wingerter

Hohn Engineering, PLLC

406-655-3381 office

406-850-9730 cell

Authorized Agent for KGH Operating Company

Sundry Number: 72687 API Well Number: 43047549840000

			1		
	STATE OF UTAH		FORM 9		
	DEPARTMENT OF NATURAL RESOURCES		5.LEASE DESIGNATION AND SERIAL NUMBER:		
	DIVISION OF OIL, GAS, AND MINII	NG	StML 52861		
SUNDF	SUNDRY NOTICES AND REPORTS ON WELLS				
Do not use this form for procurrent bottom-hole depth, FOR PERMIT TO DRILL form	7.UNIT or CA AGREEMENT NAME:				
1. TYPE OF WELL Oil Well	8. WELL NAME and NUMBER: State 28 13				
2. NAME OF OPERATOR: KGH OPERATING COMPANY	(		9. API NUMBER: 43047549840000		
3. ADDRESS OF OPERATOR: PO BOX 2235 , Billings , M		HONE NUMBER: Ext	9. FIELD and POOL or WILDCAT: WILDCAT		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1036 FSL 0971 FWL			COUNTY: UINTAH		
QTR/QTR, SECTION, TOWNS	HIP, RANGE, MERIDIAN: 28 Township: 09.0S Range: 25.0E Meridia	n: S	STATE: UTAH		
11. CHEC	K APPROPRIATE BOXES TO INDICATE	NATURE OF NOTICE, REPOR	RT, OR OTHER DATA		
TYPE OF SUBMISSION		TYPE OF ACTION			
	ACIDIZE	ALTER CASING	CASING REPAIR		
NOTICE OF INTENT Approximate date work will start:	✓ CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME		
7/7/2016		1			
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE		
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN L	FRACTURE TREAT	☐ NEW CONSTRUCTION		
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK		
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION		
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON		
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL		
DRILLING REPORT	water shutoff	SI TA STATUS EXTENSION	APD EXTENSION		
Report Date:	WILDCAT WELL DETERMINATION	OTHER	OTHER:		
/		- OTHER			
The existing pit and and the pit will be b	completed operations. Clearly show all liner were never used and the packfilled. A closed loop syste rill cuttings and drilling fluids approved off site facility.	e liner will be removed m will be used and no			
			By: Durl Jum		
NAME (PLEASE PRINT)	PHONE NUMBER	RTITLE			
Thomas Hauptman	406 259-8480	President			
SIGNATURE N/A		<b>DATE</b> 6/28/2016			

Sundry Number: 73198 API Well Number: 43047549840000

	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MININ	G	5.LEASE DESIGNATION AND SERIAL NUMBER: StML 52861
SUNDF	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:		
Do not use this form for procurrent bottom-hole depth, FOR PERMIT TO DRILL form	7.UNIT or CA AGREEMENT NAME:		
1. TYPE OF WELL Oil Well	8. WELL NAME and NUMBER: State 28 13		
2. NAME OF OPERATOR: KGH OPERATING COMPANY	(		9. API NUMBER: 43047549840000
3. ADDRESS OF OPERATOR: PO BOX 2235, Billings, M		IONE NUMBER: Ext	9. FIELD and POOL or WILDCAT: WILDCAT
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1036 FSL 0971 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 28 Township: 09.0S Range: 25.0E Meridian	ı: S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICATE I	NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
On July 8, 2016 conditions open hol approved the reque	COMPLETED OPERATIONS. Clearly show all p 6, Mr. Brad Hill was notified tha le logs could not be run in this est to waive the open hole loggi	t the due to hole well. Mr. Hill verbally ng requirement. KGH	CASING REPAIR  CHANGE WELL NAME  CONVERT WELL TYPE  NEW CONSTRUCTION  PLUG BACK  RECOMPLETE DIFFERENT FORMATION  TEMPORARY ABANDON  WATER DISPOSAL  APD EXTENSION  OTHER: Waive open hole logs require  Repths, volumes, etc.  Approved by the Utally 20/120/16of Oil, Gas and Mining
	pulsed neutron across the targ rface casing shoe. Gamma will to surface.	be run from TOC TD	By: Day
NAME (PLEASE PRINT) Thomas Hauptman	<b>PHONE NUMBER</b> 406 259-8480	TITLE President	
SIGNATURE N/A		<b>DATE</b> 7/19/2016	

	STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES		FORM 9
ι	DIVISION OF OIL, GAS, AND MINING	3	5.LEASE DESIGNATION AND SERIAL NUMBER: StML 52861
SUNDR	RY NOTICES AND REPORTS ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	posals to drill new wells, significantly deep reenter plugged wells, or to drill horizontal n for such proposals.		7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well			8. WELL NAME and NUMBER: State 28 13
2. NAME OF OPERATOR: KGH OPERATING COMPANY	,		<b>9. API NUMBER:</b> 43047549840000
3. ADDRESS OF OPERATOR: PO BOX 2235 , Billings , M		ONE NUMBER: ext	9. FIELD and POOL or WILDCAT: WILDCAT
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1036 FSL 0971 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	<mark>HP, RANGE, MERIDIAN:</mark> 28 Township: 09.0S Range: 25.0E Meridian:	S	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDICATE N	IATURE OF NOTICE, REPOR	T, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
	☐ CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	☐ WATER SHUTOFF ☐	SI TA STATUS EXTENSION	APD EXTENSION
9/6/2016	WILDCAT WELL DETERMINATION	OTHER	OTHER:
42 DESCRIPE PROPOSED OR	COMPLETED OPERATIONS. Clearly show all pe	utinant dataila inaludina dataa d	lamtha valumas ata
The surface hole ar was drilled out on J 6,750 ft on July 13, conditions. Product 2016. The well is cu	nd casing were run in September July 8, 2016. The well was drilled 2016. Open hole logs could not ion casing was run to TD and contrained the rrently being tested. Please ho confidential for a long as allow	er 2015. The surface ed to a total depth of ot be run due to hole emented on July 14, ld information on this	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY
NAME (PLEASE PRINT) Thomas Hauptman	<b>PHONE NUMBER</b> 406 259-8480	TITLE President	
SIGNATURE N/A		<b>DATE</b> 9/6/2016	

			DEPA			OF U		OURCE	S						D REPO		F	ORM 8
		[	DIVIS	ION O	F OIL	, GAS	AND	MININ	IG				5. L	EASE D		ON AND	SERIAL NUM	BER:
WEL	L COM	PLET	ION	ORI	REC	OMPI	LETIC	ON R	EPOF	RT ANI	D LOG			INDIAN	I, ALLOTTE	E OR T	RIBE NAME	· .
1a. TYPE OF WELL		Oli		7	GAS WELL		DRY		110	ER				NIT or C	A AGREE	LENT NA	ME	
b. TYPE OF WOR NEW WELL 🔽	K: HORIZ LATS.	DE EN	EP- [	]	RE- ENTRY		DIFF. RESVR		łto	ER					ME and NI 28-13	MBER:		
2. NAME OF OPER KGH Ope		mpany	,				• .		<del></del>	<u> </u>				PI NUME 4304	BER: 754984			
3. ADDRESS OF OIL PO Box 223		Ci	тү Ві	lings		STATI	∈ МТ	ZłΡ			NUMBER: 06) 259-8	3509	10 F	IELD AN	D POOL, C	R WILD	CAT	
4. LOCATION OF W AT SURFACE:			FWL				·						- 1				ISHIP, RANG	
AT TOP PRODU	CING INTERVA	L REPOR	TED BE	LOW: 1	1036 F	SL, 9	71 FW	/L					51	/VOVV	28	95	25E \$	5
AT TOTAL DEPI	тн: 1036 F	FSL, 9	71 F	WL										COUNTY Jintah			13. STATE	UTAH
14. DATE SPUDDE 9/7/2015		DATE T. 7/13/2	016		9/1	TE COMPI 3/201	6		ABANDON	ED	READY TO	PRODUC	æ 🔽	17. ELE	vations 638 GI	(DF, RKI	3, RT, GL):	
18. TOTAL DEPTH:	MD 6,75 TVD 6,75			19. PLUG	BACK T.		6,681 6,681		20. IF	MULTIPLE C	OMPLETIONS	s, How	MANY? *		PTH BRIDO LUG SET:	SE ME		
22. TYPE ELECTRIC	C AND OTHER	MECHAN	CAL LO	GS RUN (	Submit co	ppy of eaci	h)			23.								
CBL Run1 S Neutron	Surface Co	sg, CB	IL Ru	n 2 Pr	oduct	ion Cs	g, Pul	sed		WAS DST	L CORED? RUN? NAL SURVE	<b>′</b> ?	00 00 00	$\overline{Z}$	YES T	(Sub	mit analysis) mit report) mit copy)	
24. CASING AND LI	NER RECORD	(Report a	II string	s set in w	eli)													
HOLE SIZE	SIZE/GRAD	DE 1	WEIGHT	「(#/ft.)	TOP	(MD)	вотто	OM (MD)		EMENTER EPTH	CEMENT T NO. OF SA	YPE &	SLUI VOLUMI	RRY E (BBL)	CEMEN	T TOP *	ииома	T PULLED
12.25	7.00 P	116	2	3		0	1,0	003	1,	003	G	400	11	6	1	0		0
6.125	4.5 N	180	11	.6		)	6,	750			lite lea <b>ri</b>	190	10	)6	1018	CBL		0
:											G tail	100	5	2				
									<u>                                     </u>									
									<u> </u>									
25. TUBING RECOR																		
2.375	DEPTH SE 6,49		PACK	ER SET (	AD)	SIZE		DEPTH	SET (MD)	PACKE	R SET (MD)		SIZE		EPTH SET	F (MD)	PACKERS	SET (MD)
28. PRODUCING INT	-	,,,			!_			l	1									
FORMATION		TOP (F	MD)	ВОТТО	M (MD)	TOP	(TVD)	вотто			RATION REC L (Top/Bot - M		SIZE	NO. HO	EQ I	DEDUC	ATION STA	THE
(A) Mancos B		· · · · · · · · · · · · · · · · · · ·			· · · · · ·					6,500			0.38	60	<del></del>		Squeezed	П
(B) Mancos B		·····		<u> </u>		<del> </del>				6,575			0.38	60			Squeezed	屵
(C)				<u> </u>						0,0.0			0100		Орег	<del>- []</del>	Squeezed	<del> </del>
(D)								<b></b> -				<u></u>			Oper	ᆕ	Squeezed	
28. ACID, FRACTUR	E, TREATMENT	T, CEMEN	T SQUE	EZE, ETC									1		<u>l</u>	<u> </u>	<del> </del>	<u> </u>
WAS WELL H	/DRAULICALLY	'FRACTU	RED?	YES	<b>✓</b> NO		IF YES	– DATE F	RACTURE	D: 8/10/	2016	·						
DEPTH IN	TERVAL								AMO	UNT AND TY	PE OF MATE	RIAL						. ,
6500-6510			1,41	4 bb! p	oolym	er gel,	105,6	59 lbs	20-40	proppa	nt				,			
6575-6585			1,41	9 bbl r	oloym	er gel,	120,5	03 lbs	20-40	proppa	nt							
29. ENCLOSED ATT	ACHMENTS:	ICAL LOS	is.				<del>  </del>	GEO! OC!	C REPORT		NOT DEPOS		Dinco-	103141 5		30, WEL	L STATUS:	
	Y NOTICE FOR			CEMENT	VERIFICA	NOITA		CORE AN		닏	OST REPORT		I WEGI	IONAL S	UNVC1			

31. INITIAL PRO	ОПИСТІОН				INT	TERVAL A (As sho	wn in Kem #26}				
9/13/2016			DATE: 17/201	16	HOURS TESTE	D: 24	TEST PRODUCTIO RATES: →	OIL - BB	1	WATER - BBL: 9	PROD. METHOD: gas lift
сноке size: 32/64	TBG. PRES 210		PRESS. 30	API GRAVITY 43.00	вти-gas 1,262	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	ON OIL-88		WATER - BBL:	INTERVAL STATUS producing
					ואו	TERVAL B (As sho	wn in item #26)				<u></u>
DATE FIRST PR	ODUCED:	TEST	DATE:		HOURS TESTE	D.	TEST PRODUCTIO RATES: →	N OIL - BBI	L: GAS MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRES	S. CSG.	PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	ON OIL - 881	L: GAS – MCF:	WATER - BBL:	INTERVAL STATUS
					INI	TERVAL C (As sho	wn in item #26)				
DATE FIRST PR	ODUÇED:	TEST	DATE:		HOURS TESTE	D:	TEST PRODUCTIO RATES: →	N OIL - BBI	L: GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRES	S. CSG.	PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTIO RATES: →	OIL - BBI	L: GAS - MCF:	WATER - BBL:	INTERVAL STATUS:
					ТИІ	ERVAL D (As sho	wn in item #28)				
DATE FIRST PR	ODUCED:	TEST	DATE:		HOURS TESTER	D:	TEST PRODUCTIO RATES: →	N OIL-BBI	GAS MCF;	WATER B8L:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS	s. CSG.	PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTIO RATES: →	N OIL BBI	: GAS MCF:	WATER BBL:	INTERVAL STATUS:
32. DISPOSITIO	N OF GAS (S	old, Used fo	r Fuel, Ve	nted, Etc.)							
33. SUMMARY (	DE POROUS :	ONES (Incl	uda Anuff	are).			<u> </u>	24 500111	100 4 - 1 44 BYERS		
	nt zones of por	osity and co	ntents the	eof. Cored inter-	rais and all drill-stem rries.	ı tests, including dej	4	V. I Oldari	IION (Log) MARKERS:		
Formatio	n	Top (MD)		itom ID)	Descrip	tions, Contents, etc	, , , , , , , , , , , , , , , , , , ,		Name	(1	Top Measured Depth)
Wasatch		1,512				···· · · · · · · · · · · · · · · · · ·					
Mesaverde		2,514									
Castlegate		5,302									
Mancos		5,593									
Mancos B		6,220									
36. ADDITIONAL	REMARKS (I	nciude plug	ging proc	edure)			<u> </u>			<u> </u>	
Please hold	d all info	mation	on this	s well cont	idential for a	is long as al	llowable.				
36. I hereby certi	fy that the fo	egoing and	affached	Information is o	complete and corre	ct as determined f	rom ali avallable rec	ords.			·
NAME (PLEASĘ	PRINT) Th	omas F	auptm	ian /			TITLE Pres	ident	· · · · · · · · · · · · · · · · · · ·		
SIGNATURE	La	U	<i>U</i> .	Ha	ught	-	DATE 10/1	9/2016	•		
<ul> <li>drilling</li> </ul>	eting or plu horizontai	gging a n Iaterais fi	ew well om an e	ys of existing well ing formation	bore •	significantly de	reviously plugge epening an exis arbon explorator	ting well b	ndoned well ore below the previch as core sample	ious bottom-hole s and stratigrap	e depth hic tests

\* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

\*\* ITEM 24: Cement Top -- Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining

1594 West North Temple, Suite 1210

Box 145801

Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

# RECEIVED

DEC 28 2016

STATE OF LITAN

FORM 9

DEPAR"	TMENT OF NATURAL RESOUR	RCES		, , ,
DIVISIO	ON OF OIL, GAS AND MI	NING DIV. OF	FOIL, GAS & MINING	8. LEASE DESIGNATION AND SERVAL NUMBER STML 52861
SUNDRY NOT	ICES AND REPORTS	ON WEL	LS	e. If indian, allottee or tribe name:
Do not use this form for proposals to driff new wette, sig- driff horizontal isterals. Use	gnificanity despen adulting walls helow cur APPLICATION FOR PERMIT TO DRILL &	rent bottom-hole dept one for such proposal	h, reenter plugged wells, or to	7. UNIT OF CA AGREEMENT NAME:
1. TYPE OF WELL OIL WELL	GAS WELL OTHER_			WELL NAME and NUMBER: State 28-13
2. NAME OF OPERATOR.				O. API NUMBER:
KGH Operating Company				4304754984
S. ADDRESS OF OPERATOR: PO Box 2235 CITY Billings	STATE MT THE	59103	PHONE NUMBER (406) 259-8509	19. FIELD AND POOL, OR WILDGAT! WILDGAT
4. LOCATION OF WELL		أداجه والمستقل المستق		
FOOTAGES AT SURFACE: 1036 FSL 097	71 FWL			COUNTY: UIntah
GTRGTR, SECTION, TOWNSHIP, RANGE, MERIDI	ww. SWSW 28 09S 25	5E S		STATE. UTAM
11. CHECK APPROPRIA	ATE BOXES TO INDICAT	E NATURE (	OF NOTICE, REPOR	T, OR OTHER DATA
TYPE OF SUBMISSION		17	PE OF ACTION	
NOTICE OF INTENT	PORT	DOGEREN		REPERFORATE GURRENT FORMATION
	TER CABING	FRACTURE		SIDETRACK TO REPAIR WELL
1	ISING REPAIR	NEW CONST		TEMPORARILY ABANDON
	IANGE TO PREVIOUS PLANS	OPERATOR		TUBING REPAIR
7	LANGE TUBING	PLUG AND A		VENT OR FLARE
(Submit Original Form Only)	ANGE WELL NAME	PLUG BACK		WATER DISPOSAL  WATER SHUT-OFF
Date of work completion:	MANGE WELL STATUS	=	n (BTART/REGUME)	
9/13/2016	MMINGLE PRODUCING FORMATIONS INVERT WELL TYPE	=	on of Well Site te - Different formation	OTHER: Completion/Unilling
12 DESCRIBE PROPOSED OR COMPLETES  See attached reports.	D OLEKY (IOMO' Closuly show six by	ecount decommitte	arcelf agmet colorer Ariellius	i, aic.
·		_		
Form 8, Completion report was su	ubmitted October 19, 2016	3,		
NAME (PLEASE PRINT) LISS C. Allen			, Executive Assistan	nt/Bookkeener
A .		TITLE	211-211-21000	
SIGNATURE OLIA C. W	len	DATE		12/28/14

# KGH Operating State 28-13 Drilling Reports

# 7/7/2016

			DAILY ACTIVITY
1, KINW	10	1915	LIMI LANT DE LINA DE LANT DE L
6.00	11:00	50	Move and set all rig components in place.
00-11	23:00	12.0	RU aguipment and NU ISOPF. RU closed loop system, hast in mid products, fuel, water, and cuttings disposel bins.
23:00	3:00	4.0	Test BOPE (250/5000) and surface ciping (1500)
3 00	5.00	2.0	C/O iron roughneck dies, break out tester subs, and install wear husbing
5-00	6,00	1,0	Stip and cut drill line
Daily T	otal	24.0	
		ÇOS'	F DATA - THE BELOW DATA AUTOMATICALLY PULLS FROM THE COST SHEET- DO NOT MODIFY
			DAILY MUD S 321 DAILY DRILLING COST S 44,103
			CUM MUD S 2,821 CUM DRILLING COS'1' S 255,694

# 7/8/2016

			DAILY ACTIVITY	
FROM	T()	102月	NAMI (AAT 24 INMINE:	
6,00	7.00	1.0	Slip and cut drill line	
7 00	8:00	1.0	RU flare line	
R (00	10.30	2.5	PUISHA Tagged content stringer at 807.	
10.30	11,30	10	Drilled community float equipment, and 25' of formation.	
11.30	13:00	1.5	Performed formation integrity ten (a 1) ppg BMW with ProPero.	
13:00	22:00	9.0	Drill and survey from 1025'-2094' with WOB 10K and total RPM of 205.	
22.00	23,30	1.5	Primp pills for TOOH and run survey.	
23,30	2 30	3.0	TOOH to change NHA to pendulum for deviation control	
2.30	5.00	2.5	TIH. Wash last 2 joints to bottom	
5:00	6.00	1,0	Drill and mirvey from 2094-2187	
Duily T	otal	24 0		
		COST	DATA - THE BELOW DATA AUTOMATICALLY PULLS FROM THE COST SHEET - DO NOT MODIFY	· · · · · · · · · · · · · · · · · · ·
			DAILY MUD \$ 5,738 DAILY DRILLING COST \$	40,944
	_		CUM MUD S 8,559 CUM DRILLING COST S	319,364

# 7/9/2016

					DAI	LY ACTIVITY		
HK+HM_	10	lisen	LINA	BARICEI PE TRAL				
6:00	18:00	12.0		Drill and survey from 2187-3100'. Av	gRO	P 76 PPH, Incress	MW from 8.7 to 9.1 ppg	
18:00	6,00	12.0		Drill and survey from 3100'-4130'. Av	ROP	86 PPH. Increase	MW (rom 9.1 to 9.4 ppg.	
Daily T	otal	24 ()						
		COS	ľ DA	TA - THE BELOW DATA AUTOMA	i)C/	ALLY PULLS PRO	M THE COST SHEET- DO NOT MODIFY	
				DAILY MUD	3	5,644	DAILY DRILLING COST 5	34,175
				CUM MUD	5	14,203	CUM DRILLING COS'T \$	325,594

# 7/10/2016

						DAILY	ACTIVITY			
PRUM	10	HMI	CUM	IART 24 IENIKA,						
6:00	18:00	12.0		Drill from 4130'-4975'. Sur	very #1 4108	with 2.6	3. AVERO	P 70 FPH. Increase MW from	n 9.4 to 10.1 ppg	
18,00	6:00	12.0		Drill from 4975'-5575'. Inc.	eased WOI	177.5K	to IOK, Av	g ROP 50 FPH. Increase M	W from 10.1 to 10.3	PPR
Duily T	어확	24 0								
		COS	۲ D.	ATA - THE BILLOW DATA	AUTOMA	TICALL	Y PULLS F	ROM THE COST SHEET-	DO NOT MODIF	Y
				na	ILY MUD	S	8,101	DAILY DRILLE	IG COST S	33,525
					UM MUD	\$	23,304	CUM DRILLE	G COST \$	359,119

#### 7/11/2016

			DAILY ACTIVITY	
FROM	TO	JINA C	FAMILIA PETRALIA	
6-00	18:00	12.0	Drill from 5575'-6460', Avg ROP 74 I'PH. Incress M W from 10.3 to 11.0	ի ըրբ
18:00	21:30	3.5	Drill from 6460'-6682' Avg ROP 63 FPH. Logt 200 hble of mud	
21.30	2 30	50	Build 200 bbis of 10.7 ppg mud with 4% LCM.	
2 30	3.30	1.0	Pump new mud and establish full circulation. Drill from 6682'-6750'.	
3:30	6.00	2.5	Circulate bottoms up. Check flow and connection yea. Wall trying to flow	and high connection passo increase MW to 10.8.
Daily T	otal	24 0		
		COST	DATA - ITIE BELDW DATA AUTOMATICALLY PULLS FROM THE CO	OST SHEET- DO NOT MODIFY
			DAILY MUD S 11,808 DA	MLY DRILLING COST \$ 43,821
			CUM MUD \$ 34,112 C	UM DRILLING COST 5 402,946

# 7/12/2016

			DAILY ACTIVITY	
PROM	10	1 900 14	COTA FART 24 FERINGS.	
6:00	10.30	4.5	Circulate and condition mind mising MW to 10,9 ppg	
10,30	11,00		Pump 70 bbl 12.5 ppg kill mid.	
11:00	22.00		TOOH with Drill Pipe. Tight hole in Messaverde from 3000-3700'. LID arabilizers and n	notor,
22,00	23,30		Wait on drill pipe float since LD MM.	
23 30	6:00		TIH to 6500'.	
Daily 1	Otal	45		
		COS	T DATA - THE BELOW DATA AUTOMATICALLY PULLS FROM THE COST SHIET	· DO NOT MODIFY
			DAILY MUD \$ 15,590 DAILY DRILLI	NG COST' 5 74,291
			CUM MIJD S 49,702 CUM DRILLA	NG COST \$ 478,611

#### 7/13/2016

_				DAILY AC			
FROM	10	IRP	GENIA	MHICE SETHAL			
6 00	6:30	0.5		Finish TIH 1/6500' to 6750'			
6:30	7,30	10		Repair hydraulio leak			
7.30	18 00	10.5	$oldsymbol{oldsymbol{oldsymbol{oldsymbol{\Box}}}$	Trip out of hole for logs, check for flow and circulate	e during trip		
8,00	20:00	2.0		RU loganom.			
20:00	22 30	25	$\Box$	Made 3 retempts with logstry tools but tagged up as	2263'.		
2:30	23.:30	1,0		RD loggers			
13.30	0.00	0.5		Remove wear builting			
0:00	6 00	6.0	$\vdash$	Rum 4-1/2, 11.6#, N-80 onsing			
Daily T	otal	24 0	上				
		COS	T DA	TA - THE BELOW DATA AUTOMATIC ALLY P	ULLS FROM THE C	OST SHEET- DO NOT MODIFY	
				DAILY MUD \$ I,	472 D	AILY DRILLING COST 5	41,675
				CUM MUD S 51	,174	CUM DRILLING COST S	505,046

# 7/14/2016

				DAILY ACTI	Vrj' <u>Y</u>	
PHOM	TO	IRLA	CYKE	ABT \$4 (IDD(校制:		
6.00	9:30	3.5		Finish Running 4-1/2, 11 6#, N-80 oming. Tag hottom	pull 17 ft	
9:30	10.00	0.5		RU Propetro to coment casing		
10:00	13:00	3.0		Pump 20 bbl water flush, pump 20 bbl dyed mud flus	h, anw dyoto nurface, pump 190 ex, 11#, 3,13 #/god, p	ump 100 ax, 13.1#,
				I R1 #/gal, drop plug pump 104 bbl dasplacement, but	np plug at 11:30 AM, floats held,	
13:00	13:30	0.5		Full 20,000# over, Conteron act alips, cut casing		
13,30	18.00	45		Start Capater RD, truck drilling mud to Wonsit dispos	al, RD ZECO, Haul approx 40 bhl 20% KCl to Anch	or Vernal,
				clean mud traiks, release Capater at 18:00, 7-14-2016		
Daily 'f	otal	12.0				
		COS	T DA	TA - THE BELOW DATA AUTOMATICALLY PU	AS FROM THE CONT SHEET- DO NOT MODI	FY
			_	DAILY MUD S 1,93	8 DAILY DRILLING COST \$	79,708
		-		CUM MUD 5 49.0	CUM DRILLING COST S	584,190

7/19/16	0730 to 1030 Came	oron instatled tubing	head and frac tree		
	1030 to 1430 JDM	elickline and MS &	enices ran gyro survey. T	agged up at 6660	Took survey every 100
	Total Dally cost	\$ 8,320	Cumulative cost \$	8,320	

7/21/16	0830 to 930 RU Plo	neer Energy Service	<u> </u>		
	930 to 1230 Run CB	from 6631 to auria	ce. ETOC at 1020'		
	1230 to 1900 Run pu	land neutron from 6	631 to 6000		
	1900 to 1930 RD Pig	neer Energy Service	88		
	Total Daily cost	\$ 12,939	Cumulative cost \$	21,258	

22/16	0730 to 830 RU	Cameron F	Pressure Te	ster
	830 to 915 Star	test, fix le	aks and co	nnections
	915 to 945 Pres	ure tested	casing and	I frac tree to 6470 and held for 30 minutes.
	945 to 1015 RD			
	Total Daily cos	\$	1.627	Cumulative cost \$ 22,936
	Total Daily cos	\$	1,627	Cumulative cost \$ 22,936
				Cumulative cost \$ 22,936

Saturday-No Activity
Sunday-No Activity
Monday-No Activity
715 to 845 RU hardline to flowback tank and RU swabbers.
845 to 1215 Swab from surface to 3100'
1215 to 1245 RD Delaco awabbers
Total Daily cost \$ 3,702 Cumulative cost \$ 26,636

7/27/16	745 to 815 RU Delaco awabbers.
	815 to 1530 Swab well down from 3200 to 6580. Total water swabbed for last 2 days ~100 bbls.
	1530 to 1600 RD swabbers
	1715 to 1800 RU water truck, unload 50 bbls of 4% KCI with biocide into well bore, and RD water truck
<del></del>	

To:8013593940

7/28/15	645 to 730 RU Cutters wheline
	730 to 915 RIH with 10' perfigun loaded 6 spf with 19 gram charges. Perf from 6575-85'. FL before shot at 330
	and FL after at 2700". Well would not flow
	815 to 1400 Decided to breakdown perfs so walted on acid, KCI water, and hot olier. Installed deadmen.
	1400 to 1445 RU hot oller and filled hole with 4% KCI water then RU wireline and filled baller with sold
	1430 to 1615 RIM with poid in baller and placed gold #8572-6582 then TOOH with windling.
	1615 to 1630 RU hot oller and breakdown perfs as follows: Perfs broke at 1700# (-4700# BHP), ISIP at 1300#
	Pumped about 2 bbls into perfs then started immediate flowback
	1630 to 1640 Well flowed steady but continually smaller stream of water.
	1640 to 1660 Well flowed in stuge
	1650 to 1730 Well gurgling
	1730 to 1800 SWIFN. No preasure buildup in ,6 hours.
	Total Daily cost \$ 9,511 Cumulative cost \$ 39,576

7/29/16	700 Pressure gauge showed 500 pai. Opened to tank and blew down immediately.
	0730 to 0815 RU swabbers, Initial tank gauge at 1' 10.5".
	0815 to 1000 Made 9 swab runs. Shut down to check for inflow.
	1000 to 1100 Checked for inflow. No flow after 1 hour.
	1100 to 1330 Made 6 more swab runs. Last pull from 3900'. Changed swab cups.
	1330 to 1600 Made 6 more awab runs. Last pull from 5500'. Final tank gauge at 3' 6".
	1600 to 1630 Walted 30 minutes before RIH and tag fluid to allow for better fluid level reading.
	1630 to 1700 TiH and tag fluid level at 5450'.
	Total fluid recovery to tank ~88 bbls (21 swab runs)
	Total capacity of casing to 5450' is ~85 bbls.
	Note: Dally costs include tubing head and well head tangible items (\$12370)
	Total Daily cost \$ 15,422 Cumulative cost \$ 54,998

Run 2 tag fluid at 5550' and pull from 5900'. Recovered ~5 bbls.	730 to 830 TIH on run 1 and tag fluid at 5300' and pull from 5600'. FL at end of yeaterday at 5450'	7/30/16	700 Pressure gauge showed 0 psi. Opened it up and well on vacuum. Skim of oil	on tank.
Run 2 tag fluid at 5550' and pull from 5900'. Recovered ~5 bbls.	Run 2 tag fluid at 5550' and pull from 5900'. Recovered -5 bbls.		715 to 730 RU Swabbers	
	غوال الثارات المستقل المستخور		730 to 830 TIH on run 1 and tag fluid at 5300' and pull from 5600'. FL at end of yesterday	at 5450'
920 to 045 Delegand do and stand do a	830 to 915 Released rig and rigged down.		Run 2 tag fluid at 5550' and pull from 5900'. Recovered -5 bbls.	
aso to a to Released ng and nggeo down.			830 to 915 Released rig and rigged down.	
			Total Dally cost \$ 1,432 Cumulative cost \$ 56,630	

8/9/16	Prep for frac from 8/1/2016 (	o 6/9/2016	
	Move in and RU flowback ex	sulpment. Move in and fill 4-1000 bbl	frac tanks. Move in light plants, trash basket,
	and porta johns.		
<u></u>			
L	Total Daily cost	Cumulative cost \$	71,713

	0700 to 1000 Move in and RU Halliburton Frec Fleet	
	1000 to 1415 Walt on clay stabilizer chemical	
	1415 to 1615 Pump stage 1 as per procedure	
	1615 to 1730 RU wireline, RiH set CFP at 6529 and part 6 spf from 6500-6510 then POOH and rig down to	wir <del>al</del> ii
	1715 to 1815 clean out plugged blender	
	1815 to 1930 pump stage 2 as per procedure	
	Total clean volume pumped 2833 bbls (load to recover)	
	1930 to 2100 RD Halliburton iron near well head, RU flowback iron. CP 1150 psi	
	2100 to 0700 Open well to flowback tank. Initial FCP=300 pai Final FCP=10 pai	
	Recovered 1220 bbts of water so 43% of load has been recovered. Tank has skim of oil and w	rall w
	making gas.	
	700 Shut well in to build pressure	
<del></del>		
	Total Daily cost \$ 172,807 Cumulative cost \$ 250,661	

B/11/16	0700 to 900 Well shut in and built pressure from 10 psi to 150 psi
	0900 to 1000 Opened well to tank and it made 35 bbls of water
	1000 to 1200 Well shut in and built pressure from 30 psi to 130 psi
	1200 to 1300 Opened well to tank and it made 15 bbls of water
	1300 to 0700 Well shut in weiting on work over rig
	Note: Corrected total water produced since flowback started is 1200 bbts so 42% of load has been reco
	Note: Corrected total water produced since flowback started is 1200 bbis so 42% of load has been reco
	Note: Corrected total water produced since flowback started is 1200 bbis so 42% of load has been reco

B/12/16	0800 Rig on location. SICP was 126 pai. Open well to tank.
	0800 to 1300 Move in rig tank, rig pump, pipe racks and RU work over rig.
	1300 to 1400 Unload and tally tubing.
	1400 to 1500 Run lines to rig tank, move BOPs and hookup hydraulic lines to prep for NU
	1500 to 1600 Open well to rig tank, ND frac tree, NU BOPE
	1600 to 1700 Set floor, PU tongs and slips, prep for tripping in on Mon. SDFWE
	Note: Well flowed a total of 48 bbis with cumulative of 1248 or 44% of load recovered.
	Total Dally cost \$ 20,982 Cumulative cost \$ 276,208

8/15/16	0600 SICP was 25 pai after being SI for weekend. Open well to tank.
	0630 to 0700 PU bit and bit sub Prep to TIH.
	0700 to 0730 Started in hole but well flowing up tubing. POOH for pump off bit aub.
	0730 to 0930 Wait for POBS with string float.
	0930 to 1300 'TiH and tag plug at 6660'.
	1300 to 1400 Hookup hard line to upright, circulate surface equipment to clean up lines and hoses. CP built to
	1400 to 1630 Fill the, drill plug in 10 min., circ bottoms up (2X), clean out to 6863', circ bottoms up (2X).
	1630 to 1730 LD 4 joints, land tubing at 6531', ND BOP, NU production tree. Drop ball and pump of bit. 1100 p
	drop when bit was pumped off.
	1730 Open well to tank.
	Note: There is a 30' difference between wireline log depth from CBL and tubing depths.
	CFP was set at 6529' WL depth but tagged at 6560' with tubing.
	Total Daily cost \$ 13,192 Cumulative cost \$ 289,960

To:8013593940

R/16/16	0700 SICP was 20 psi after being SI over night. Open well to tank, Minimat flow to tank then dead.
	0700 to 0800 RU swab equipment. RD miscellaneous equipment for rig move.
	0800 to 1000 Made 14 swab runs and recovered 68 bbts of fluid. Ending FL at 600' and pulling from 2500'
	1000 to 1130 Well St while RD rig and RU swabbers.
	1130 to 1800 Made 17 awab runs and recovered 178 bbts of fluid. Ending FL at 1200 and pulling from 33
	Estimated total inflow from reservoir today was total recovered minus total drop in casing.
	248-17=229 bbis of inflow from reservoir
	Percent of load recovered = 53%
	Total Daily cost \$ 6,120 Cumulative cost \$ 298,772

8/17/16	0700 SICP was 0 psi and TP was 50 psi after being SI over night. Open well to tank, died quickl
	0700 to 1500 Made 23 swab runs. Well started to flow after swabs.
	1500 to 1730 Made 5 swab runs and well kicked off.
	1800 Flowing to tank, FTP=80 pel, CP=50 psi Turned well over to flowback crew.
	Total bbis recovered for the day as of 1800=245 bbis
	10(d) MUIS (CCUYC) CO 101 1/10 UMY AS UI (CUU-290 DUIS
	Percent of load recovered as of 1800 = 62%

B/18/16				uipment. (See flowback report for details) DPD, 283 BWPD	
	Total bbls recovered	for the	day 263 bb	a	
	Percent of load reco				
	Total Dally cost	\$	5,617	Cumulative cost \$ 313,344	

Total Daily cost

8/19/16	0000 to 0800 Flowing thru flowback equipment. (See flowback report for details)	
	0800 Shut well in for evaluation. Released flowback crew.	
	8 hr avg 315 MCFD, 5 BOPD, 140 BWPD	
<del></del>		_
	Total bbls recovered for the day as of 0800=53 bbls	
	Percent of load recovered as of 0800 = 77%	
		-
Para 12, 114, Para		
	Total Dally cost \$ 2,630 Cumulative cost \$ 315,974	
8/23/16	1100 Shot casing fluid level and found it at ~3230'.	
8/23/16	1100 Shot casing fluid level and found it at ~3230'.  CP = 1440#, 'TP = 1300#	
8/23/16		

14062592124

8/24/16	0900 to 1100 RU hard line to tank with choke.
	1100 to 1900 Flow well to tank. (See flowback report for details)
	(CP = 1420# FCP = 1175#, ITP = 1300# FTP = 750#
	Total oil produced for the 8 hour flow = 63 bbls
	Total water produced for the 8 hour flow = 25 bbls
	Percent of load recovered at end of 8 hour flow = 78%
	Percent or load recovered at end of official low ≥ (6%
	Total Daily cost \$ 977 Cumulative cost \$ 318,069

Cumulative cost \$ 317,092

934

8/25/16	0700 Shot fluid level and found at 5400',	
	0700 to 1500. Flow well to tank. (See flowback report for details)	
	ICP = 1400# FCP = 720#, ITP = 1175# FTP = 250#	
	Opened choke from 14 to 24 after 4 hours of flow	
	Total oil produced for the 8 hour flow = 35 bbis	
	Total water produced for the 8 hour flow = 34 bbis	
	Percent of load recovered at and of 8 hour flow = 79%	
		<u>,                                     </u>
<del>-</del> i	Total Daily cost \$ 677 Cumulative cost \$ 318,746	

8/26/16	0700 Shot fluid level and found at 5240'.
	0700 to 1500 Flow well to tank. (See flowback report for details)
	ICP = 1120# FCP = 700#, ITP = 1000# FTP = 225#
	Flowed on 24 choke for all 8 hours
	Note: From 1415 to 1445 well was shut in with plans to run pressure buildup test but had battery proble
	Also from 1300 to 1330 well was shut in for echometer surveys.
	Total oil produced for the 8 hour flow = 30.5 bbls
	Total water produced for the 8 hour flow = 39.5 bbls
	Percent of load recovered at end of 8 hour flow = 81%
	Total Daily cost \$ 677 Cumulative cost \$ 319,423

8/27/16	0700 Shot fluid level and found at 5150'.
	0700 to 1100 Flow well to tank. (See flowback report for details)
·	ICP = 1065# FCP = 690#, ITP = 950# FTP = 300#
	Flowed on 24 choke for all 4 hours
	1100 to 1130 TiH with pressure survey. Had surface leak in W/L BOP so TOOH.
	1130 to 1210 TOOH and c/o BOP. Till and set gauges at 6506'. Start survey. Plan to run for 72 hour
	Total oil produced for the 4 hour flow = 16.5 bbts
	Total water produced for the 4 hour flow = 16 bbls
	Percent of load recovered at end of 8 hour flow = 81%
	Total Daily cost \$ 1,927 Cumulative cost \$ 321,350
THE RESERVE THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN THE PERSON	

8/28/16	Well SI with pressure gauges in hole
/29/16	Well SI with pressure gauges in hole. CP at 1700 was 1200 psi.
/30/16	Well SI with pressure gauges in hole. CP at 0930 was 1220 psi. Fluid level was ~4675'.
/31/16	Well SI with pressure gauges in hole. CP at 0900 was 1245 psi. Fluid level was ~4585'.
	0000 to 1300 SI with pressure gauges. CP at 1730 was 1260 psi. TP at 1730 was 1150 psi.
	1300 to 1730 TOOH with gauges, stopping every 100' for gradients until 2500' then every 250'.
	Delivered sand and gravel for tank pad
	Installed containment liner and built pad for tanks
······	
······································	Percent of load recovered as of 8/31/16 = 81%
	Total Daily cost \$ 6,227 Cumulative cost \$ 336,910

9/1/16	Set 3 production tanks, stairs, a	nd landing.
	No planned activity until after Lat	oor Day weekend.
	Total Daily cost \$ 27,70	50 Cumulative cost \$ 366,710

	Transferred oil from flowback tank to production tank. Drained ~130 bbls of water and hauled to dispos
	Removed flowback lines and hauled back to town.
	Hauled test separator, glycol, and flare stack back to town.
	Delivered separator and fire tubes for tanks,
	Installed valves and plugs in production tanks.
9/6/16	CP at 0900 was 1360 psi. Fluid level was 4083'.
9/6/16	No activity (Labor Day)
9/4/16	No activity
9/3/16	No activity
9/2/16	No activity

9/7/16	No activity
9/8/18	No activity
9/9/16	CP at 0900 was 1395 pel and TP was 1275 pel. Fluid tevel was 3955.
	Start facility construction. Deliver and set flam, fabricate flow lines and gas supply lines.
	Build tank berm, finish liner install, and fill with gravel.
	install tank fire tubes and exhaust stacks, install scrubbers, set and level separator, install separator exhaust stacks
	Total Daily cost \$ 6,627 Cumulative cost \$ 414,314

9/10/16	Finish facility construction at 90%. Still need to install trace heat lines and insulate all flow lines and gas sur
	lines as well as complete automation installation.
9/11/16	No activity.
9/12/16	CP at 0900 was 1420 pal and TP was 1275 psl., Fluid level was 3830.
	Started producing well through separator at 1015 AM. (See flowback report for details)
	From 1015 to 1700 well flored 60 MCF of gas, 38 BO, and 0 BW on a 14 choke.
	Total Daily cost \$ 677 Cumulative cost \$ 424,991

9/13/16	CP at 0800 was 1430 pal and TP was 775 pai.	
	From 0800 to 0830 shut well in to work on flare and water dump	
	From 0900 to 0915 shut well in to change orifice plate in meter run.	
	From 0800 to 1700 well flared ~77 MCF, 32BO, and 6 BW on a 14 choke.	
	Total Daily cost \$ 677 Cumulative cost \$ 425,688	

#### RECEPTION OK

JOB NO.

5442

DESTINATION ADDRESS

14062592124

SUBADDRESS

DESTINATION ID

ST. TIME

12/28 12:41

TX/RX TIME PGS.

02' 33 11

RESULT

OK

	STATE OF UTAH		FORM 9			
ı	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN	3	5.LEASE DESIGNATION AND SERIAL NUMBER: StML 52861			
SUNDR	Y NOTICES AND REPORTS	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:			
	posals to drill new wells, significantly reenter plugged wells, or to drill horizo n for such proposals.			7.UNIT or CA AGREEMENT NAME:		
1. TYPE OF WELL Oil Well				8. WELL NAME and NUMBER: State 28 13		
2. NAME OF OPERATOR: KGH OPERATING COMPANY	,			9. API NUMBER: 43047549840000		
<b>3. ADDRESS OF OPERATOR:</b> PO BOX 2235, Billings, M	T, 59103 406 259-848		DNE NUMBER: xt	9. FIELD and POOL or WILDCAT: WILDCAT		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1036 FSL 0971 FWL				COUNTY: UINTAH		
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 28 Township: 09.0S Range: 25.0E Meri	dian:	S	STATE: UTAH		
11. CHEC	K APPROPRIATE BOXES TO INDICA	TE N	ATURE OF NOTICE, REPOR	T, OR OTHER DATA		
TYPE OF SUBMISSION			TYPE OF ACTION			
	ACIDIZE		ALTER CASING	CASING REPAIR		
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS		CHANGE TUBING	CHANGE WELL NAME		
Approximate date work will start.	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE		
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN		FRACTURE TREAT	NEW CONSTRUCTION		
9/13/2016	OPERATOR CHANGE		PLUG AND ABANDON	PLUG BACK		
SPUD REPORT	PRODUCTION START OR RESUME		RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION		
Date of Spud:	REPERFORATE CURRENT FORMATION		SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON		
	TUBING REPAIR		VENT OR FLARE	WATER DISPOSAL		
DRILLING REPORT	WATER SHUTOFF		SI TA STATUS EXTENSION	APD EXTENSION		
Report Date:		,				
	WILDCAT WELL DETERMINATION	<b>V</b>	OTHER	OTHER: Daily Completion Report		
	See Attached Completion R	-	<del>-</del>	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY January 25, 2017		
NAME (PLEASE PRINT)	PHONE NUMB	ER	TITLE			
Lisa C. Allen	406-259-8509		Executive Assistant/Bookkeeper			
SIGNATURE N/A		DATE 1/12/2017				

# KGH Operating

7/19/16	0730 to 1030	Cameron ins	stalled tub	ing head and frac tree		
	1030 to 1430	JDM slicklin	e and MS	Services ran gyro survey.	Tagged up at 6660'.	Took survey every 100
	Total Daily co	ost \$	8,320	Cumulative cost	\$ 8,320	

7/21/16	0830 to 930 RU Pioneer Energy Services	
	930 to 1230 Run CBL from 6631 to surface. ETOC at 1020'	
	1230 t0 1900 Run pulsed neutron from 6631 to 6000	
	1900 to 1930 RD Pioneer Energy Services	
	<del>.</del>	
	Total Daily cost \$ 12,939 Cumulative cost \$ 21,258	

7/22/16	0730 to 830 RU Cameron Pressure Tester					
	830 to 915 Start test, fix leaks and connections					
	915 to 945 Pressure tested casing and frac tree to 6470 and held for 30 minutes.					
	945 to 1015 RD Cameron Pressure Tester					
	Total Daily cost \$ 1,527 Cumulative cost \$ 22,936					
	Note: Saturday and Sunday 7/23 and 7/24 there was no activity					

7/23/16	SaturdayNo Activity				
7/24/16	SundayNo Activity				
7/25/16	MondayNo Activity				
7/26/16	715 to 845 RU hardline to flowback tank and RU swabbers.				
	845 to 1215 Swab from surface to 3100'				
	1215 to 1245 RD Delsco swabbers				
	Total Daily cost \$ 3,702 Cumulative cost \$ 26,638				

7/27/16	745 to 815 RU Delsco swabbers.						
	815 to 1530 Swab well down from 3200' to 6580'. Total water swabbed for last 2 days ~100 bbls.	815 to 1530 Swab well down from 3200' to 6580'. Total water swabbed for last 2 days ~100 bbls.					
	1530 to 1600 RD swabbers						
	1715 to 1800 RU water truck, unload 50 bbls of 4% KCl with biocide into well bore, and RD water truck	ck					
	Total Daily cost \$ 3,462 Cumulative cost \$ 30,065						

7/28/16	645 to 730 RU Cutters wireline
	730 to 815 RIH with 10' perf gun loaded 6 spf with 19 gram charges. Perf from 6575-85'. FL before shot at 33
	and FL after at 2700'. Well would not flow.
	815 to 1400 Decided to breakdown perfs so waited on acid, KCl water, and hot oiler. Installed deadmen.
	1400 to 1445 RU hot oiler and filled hole with 4% KCl water then RU wireline and filled bailer with acid
	1430 to 1615 RIH with acid in bailer and placed acid f/6572-6582 then TOOH with wireline.
	1615 to 1630 RU hot oiler and breakdown perfs as follows: Perfs broke at 1700# (~4700# BHP), ISIP at 1300a
	Pumped about 2 bbls into perfs then started immediate flowback
	1630 to 1640 Well flowed steady but continually smaller stream of water.
	1640 to 1650 Well flowed in slugs
	1650 to 1730 Well gurgling
	1730 to 1800 SWIFN. No pressure buildup in .5 hours.
	Total Daily cost \$ 9,511 Cumulative cost \$ 39,576

7/29/16	700 Pressure gauge showed 500 psi. Opened to tank and blew down immediately.				
	0730 to 0815 RU swabbers. Initial tank gauge at 1' 10.5".				
	0815 to 1000 Made 9 swab runs. Shut down to check for inflow.				
	1000 to 1100 Checked for inflow. No flow after 1 hour.				
	1100 to 1330 Made 6 more swab runs. Last pull from 3900'. Changed swab cups.				
	1330 to 1600 Made 6 more swab runs. Last pull from 5500'. Final tank gauge at 3' 6".				
	1600 to 1630 Waited 30 minutes before RIH and tag fluid to allow for better fluid level reading.				
	1630 to 1700 TIH and tag fluid level at 5450'.				
	Total fluid recovery to tank ~88 bbls (21 swab runs)				
	Total capacity of casing to 5450' is ~85 bbls.				
	· · · · ·				
	Note: Daily costs include tubing head and well head tangible items (\$12370)				
	, , ,				
	Total Daily aget & 45 400 Computative aget & 54 000				
	Total Daily cost \$ 15,422 Cumulative cost \$ 54,998				

7/30/16	Pressure gauge showed 0 psi. Opened it up and well on vacuum. Skim of oil on tank.
	715 to 730 RU Swabbers
	730 to 830 TIH on run 1 and tag fluid at 5300' and pull from 5600'. FL at end of yesterday at 5450'
	Run 2 tag fluid at 5550' and pull from 5900'. Recovered ~5 bbls.
	830 to 915 Released rig and rigged down.
	Total Daily cost \$ 1,432 Cumulative cost \$ 56,530

8/9/16	Prep for frac from 8/1/2016 to 8/9/201	6	
	Move in and RU flowback equipment.	Move in and fill 4-1000 bbl frac tanks	s. Move in light plants, trash baske
	and porta johns.		
	Total Daily cost	Cumulative cost \$ 71,713	1

# KGH Operating

8/10/16	0700 to 1000 Move in and RU Halliburton Frac Fleet
	1000 to 1415 Wait on clay stabilizer chemical
	1415 to 1615 Pump stage 1 as per procedure
	1615 to 1730 RU wireline, RIH set CFP at 6529' and perf 6 spf from 6500-6510' then POOH and rig down wireline
	1715 to 1815 clean out plugged blender
	1815 to 1930 pump stage 2 as per procedure
	Total clean volume pumped 2833 bbls (load to recover)
	1930 to 2100 RD Halliburton iron near well head, RU flowback iron. CP 1150 psi
	2100 to 0700 Open well to flowback tank. Initial FCP=300 psi Final FCP=10 psi
	Recovered 1220 bbls of water so 43% of load has been recovered. Tank has skim of oil and well was
	making gas.
	700 Shut well in to build pressure
	Total Daily cost \$ 172,607 Cumulative cost \$ 250,551

8/11/16	0700 to 900 Well shut in and built pressure from 10 psi to 150 psi					
	0900 to 1000 Opened well to tank and it made 35 bbls of water					
	1000 to 1200 Well shut in and built pressure from 30 psi to 130 psi					
	1200 to 1300 Opened well to tank and it made 15 bbls of water					
	1300 to 0700 Well shut in waiting on work over rig					
	Note: Corrected total water produced since flowback started is 1200 bbls so 42% of load has been recovered					
	Total Daily cost \$ 4,625 Cumulative cost \$ 255,226					

8/12/16	0800 Rig on location. SICP was 125 psi. Open well to tank.	
	0800 to 1300 Move in rig tank, rig pump, pipe racks and RU work over rig.	
	1300 to 1400 Unload and tally tubing.	
	1400 to 1500 Run lines to rig tank, move BOPs and hookup hydraulic lines to prep for NU	
	1500 to 1600 Open well to rig tank, ND frac tree, NU BOPE	
	1600 to 1700 Set floor, PU tongs and slips, prep for tripping in on Mon. SDFWE	
	<u> </u>	
	Note: Well flowed a total of 48 bbls with cumulative of 1248 or 44% of load recovered.	
	Total Daily cost \$ 20,982 Cumulative cost \$ 276,208	

8/15/16	0600 SICP was 25 psi after being SI for weekend. Open well to tank.	
	0630 to 0700 PU bit and bit sub. Prep to TIH.	
	0700 to 0730 Started in hole but well flowing up tubing. POOH for pump off bit sub.	
	0730 to 0930 Wait for POBS with string float.	
	0930 to 1300 TIH and tag plug at 6560'.	
	1300 to 1400 Hookup hard line to upright, circulate surface equipment to clean up lines and hoses. CP	built to 75.
	1400 to 1630 Fill tbg, drill plug in 10 min., circ bottoms up (2X), clean out to 6663', circ bottoms up (2X).	-
	1630 to 1730 LD 4 joints, land tubing at 6531', ND BOP, NU production tree. Drop ball and pump off bit.	1100 psi
	drop when bit was pumped off.	
	1730 Open well to tank.	
	Note: There is a 30' difference between wireline log depth from CBL and tubing depths.	
	CFP was set at 6529' WL depth but tagged at 6560' with tubing.	
	Total Daily cost \$ 13,192 Cumulative cost \$ 289,960	

8/16/16	0700 SICP was 20 psi after being SI over night. Open well to tank. Minimal flow to tank then dead.				
	0700 to 0800 RU swab equipment. RD miscellaneous equipment for rig move.				
	0800 to 1000 Made 14 swab runs and recovered 68 bbls of fluid. Ending FL at 600' and pulling from 2500				
	1000 to 1130 Well SI while RD rig and RU swabbers.				
	1130 to 1800 Made 17 swab runs and recovered 178 bbls of fluid. Ending FL at 1200' and pulling from 33				
	Estimated total inflow from reservoir today was total recovered minus total drop in casing.				
	246-17=229 bbls of inflow from reservoir				
	Percent of load recovered = 53%				
•	Total Daily cost \$ 6,120 Cumulative cost \$ 298,772				

8/17/16	0700 SICP was 0 psi and TP was 50 psi after being SI over night. Open well to tank, died quickly.
	0700 to 1500 Made 23 swab runs. Well started to flow after swabs.
	1500 to 1730 Made 5 swab runs and well kicked off.
	1800 Flowing to tank. FTP=80 psi, CP=50 psi Turned well over to flowback crew.
	Total bbls recovered for the day as of 1800=245 bbls
	Percent of load recovered as of 1800 = 62%

8/18/16	0000 to 2400 Flowin	ng thru	flowback equ	uipment. (See flowback report for details)
	24 hr avg	44 <mark>0 N</mark>	1CFD, 40 BC	DPD, 263 BWPD
	Total bbls recovered	I for the	e day 263 bb	ls
	Percent of load reco	vered a	at end of day	<i>y</i> = 76%
	Total Daily cost	\$	5,617	Cumulative cost \$ 313,344

#### **KGH Operating**

State 28-13 Completion Reports

Total Daily cost

\$

934

8/19/16	0000 to 0800 Flowing thru flowback equipment. (See flowback report for details)				
	0800 Shut well in for	evaluation. Relea	sed flowback crew.		
	8 hr avg 3	315 MCFD, 5 BOP	D, 140 BWPD		
	Total bbls recovered	for the day as of 0	0800=53 bbls		
	Percent of load reco	vered as of 0800 =	77%		
	Total Daily and	ф 2 c20	Computative and C	245.074	
	Total Daily cost	\$ 2,630	Cumulative cost \$	315,974	
	Total Daily cost	\$ 2,630	Cumulative cost \$	315,974	
	Total Daily cost	\$ 2,630	Cumulative cost \$	315,974	
8/23/16	•	, , , , , , ,	·	315,974	
8/23/16	1100 Shot casing flu	uid level and found	·	315,974	
8/23/16	1100 Shot casing flu	, , , , , , ,	·	315,974	
8/23/16	1100 Shot casing flu	uid level and found in 1000 to	it at ~3230'.	315,974	

8/24/16	0900 to 1100 RU hard line to tank with choke.
	1100 to 1900 Flow well to tank. (See flowback report for details)
	ICP = 1420# FCP = 1175#, ITP = 1300# FTP = 750#
	Total oil produced for the 8 hour flow = 63 bbls
	Total water produced for the 8 hour flow = 25 bbls
	Percent of load recovered at end of 8 hour flow = 78%
	Total Daily cost \$ 977 Cumulative cost \$ 318,069

Cumulative cost \$ 317,092

8/25/16	0700 Shot fluid level and found at 5400'.
	0700 to 1500 Flow well to tank. (See flowback report for details)
	ICP = 1400# FCP = 720#, ITP = 1175# FTP = 250#
	Opened choke from 14 to 24 after 4 hours of flow
	Total oil produced for the 8 hour flow = 35 bbls
	Total water produced for the 8 hour flow = 34 bbls
	Percent of load recovered at end of 8 hour flow = 79%
	Total Daily cost \$ 677 Cumulative cost \$ 318,746

# KGH Operating

8/26/16	0700 Shot fluid level and found at 5240'.		
	0700 to 1500 Flow well to tank. (See flowback report for details)		
	ICP = 1120# FCP = 700#, ITP = 1000# FTP = 225#		
	Flowed on 24 choke for all 8 hours		
	Note: From 1415 to 1445 well was shut in with plans to run pressure buildup test but had battery probler		
	Also from 1300 to 1330 well was shut in for echometer surveys.		
	Total oil produced for the 8 hour flow = 30.5 bbls		
	Total water produced for the 8 hour flow = 39.5 bbls  Percent of load recovered at end of 8 hour flow = 81%		
	Total Daily cost \$ 677 Cumulative cost \$ 319,423		

8/27/16	0700 Shot fluid level and found at 5150'.
	0700 to 1100 Flow well to tank. (See flowback report for details)
	ICP = 1065# FCP = 690#, ITP = 950# FTP = 300#
	Flowed on 24 choke for all 4 hours
	1100 to 1130 TIH with pressure survey. Had surface leak in W/L BOP so TOOH.
	1130 to 1210 TOOH and c/o BOP. TIH and set gauges at 6506'. Start survey. Plan to run for 72 hours.
	Total oil produced for the 4 hour flow = 16.5 bbls
	Total water produced for the 4 hour flow = 16 bbls
	Percent of load recovered at end of 8 hour flow = 81%
	Total Daily cost \$ 1.927 Cumulative cost \$ 321.350

8/28/16	Well SI with pressure gauges in hole.
8/29/16	Well SI with pressure gauges in hole. CP at 1700 was 1200 psi.
8/30/16	Well SI with pressure gauges in hole. CP at 0930 was 1220 psi. Fluid level was ~4675'.
8/31/16	Well SI with pressure gauges in hole. CP at 0900 was 1245 psi. Fluid level was ~4585'.
	0000 to 1300 SI with pressure gauges. CP at 1730 was 1260 psi. TP at 1730 was 1150 psi.
	1300 to 1730 TOOH with gauges, stopping every 100' for gradients until 2500' then every 250'.
	Delivered sand and gravel for tank pad
	Installed containment liner and built pad for tanks
	· · · · · · · · · · · · · · · · · · ·
	Percent of load recovered as of 8/31/16 = 81%
	Total Daily cost \$ 6,227 Cumulative cost \$ 336,910

9/1/16	Set 3 production tan	ks, st	airs, and lar	nding.
	No planned activity υ	ıntil a	fter Labor Da	ay weekend.
	Total Daily cost	\$	27,750	Cumulative cost \$ 366,710

# **KGH Operating**

9/2/16	No activity
9/3/16	No activity
9/4/16	No activity
9/5/16	No activity (Labor Day)
9/6/16	CP at 0900 was 1360 psi. Fluid level was 4083'.
	Installed valves and plugs in production tanks.
	Delivered separator and fire tubes for tanks.
	Hauled test separator, glycol, and flare stack back to town.
	Removed flowback lines and hauled back to town.
	Transferred oil from flowback tank to production tank. Drained ~130 bbls of water and hauled to disposa
	Total Daily cost \$ 34,277 Cumulative cost \$ 401,187

9/7/16	No activity	
9/8/16	No activity	
9/9/16	CP at 0900 was 1395 psi and TP was 1275 psi Fluid level was 3955'.	
	Start facility construction. Deliver and set flare, fabricate flow lines and gas supply lines.	
	Build tank berm, finish liner install, and fill with gravel.	
	Install tank fire tubes and exhaust stacks, install scrubbers, set and level separator, install separator exh	naust stacl
	Total Daily cost \$ 6,627 Cumulative cost \$ 414,314	

9/10/16	Finish facility construction at 90%. Still need to install trace heat lines and insullate all flow lines and gas sup					
	lines as well as complete automation installation.					
9/11/16	No activity.					
9/12/16	CP at 0900 was 1420 psi and TP was 1275 psi Fluid level was 3830'.					
	Started producing well through separator at 1015 AM. (See flowback report for details)					
	From 1015 to 1700 well flared 60 MCF of gas, 38 BO, and 0 BW on a 14 choke.					
	Total Daily cost \$ 677 Cumulative cost \$ 424.991					

9/13/16	CP at 0800 was 1430 psi and TP was 775 psi.							
	From 0800 to 0830 shut well in to work on flare and water dump.							
	From 0900 to 0915 shut well in to change orifice plate in meter run.							
	From 0800 to 1700 well flared ~77 MCF, 32BO, and 6 BW on a 14 choke.							
	Total Daily cost \$ 677 Cumulative cost \$ 425,668							

	STATE OF UTAH			FORM
ı	DEPARTMENT OF NATURAL RESOUR DIVISION OF OIL, GAS, AND MI		3	5.LEASE DESIGNATION AND SERIAL NUMBER StML 52861
SUNDR	Y NOTICES AND REPORTS	ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	posals to drill new wells, significantly reenter plugged wells, or to drill horize n for such proposals.			7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well				8. WELL NAME and NUMBER: State 28 13
2. NAME OF OPERATOR: KGH OPERATING COMPANY	,			9. API NUMBER: 43047549840000
3. ADDRESS OF OPERATOR: PO BOX 2235, Billings, M	T, 59103 406 259-84		NE NUMBER: xt	9. FIELD and POOL or WILDCAT: WILDCAT
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1036 FSL 0971 FWL				COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 28 Township: 09.0S Range: 25.0E Mer	idian:	S	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDICA	TE N	ATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION			TYPE OF ACTION	
	ACIDIZE		ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS		CHANGE TUBING	CHANGE WELL NAME
	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	□ F	RACTURE TREAT	☐ NEW CONSTRUCTION
	OPERATOR CHANGE	☐ F	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	□ F	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION		SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR		/ENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF		SI TA STATUS EXTENSION	APD EXTENSION
9/13/2016	WILDCAT WELL DETERMINATION		OTHER	OTHER:
12 DESCRIBE PROPOSED OR	COMPLETED OPERATIONS. Clearly show	all ne	rtinent details including dates d	<u> </u>
	t, Form 8 Completion report 19, 2016.			Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY January 25, 2017
NAME (PLEASE PRINT)	PHONE NUMI	BER	TITLE  Evacutive Assistant/Pookks	nonor .
Lisa C. Allen	406-259-8509		Executive Assistant/Bookke	eeper
SIGNATURE N/A			<b>DATE</b> 1/12/2017	

# KGH Operating State 28-13 Drilling Reports

# 7/7/2016

				DAILY ACTIVITY		
FROM	TO	HRS	CODE	LAST 24 HOURS:		
6:00	11:00	5.0		Move and set all rig components in place.		
11:00	23:00	12.0		RU equipment and NU BOPE. RU closed loop system, haul in mud products, fuel, water, and cuttings disposal bins.		
23:00	3:00	4.0		Test BOPE (250/5000) and surface casing (1500)		
3:00	5:00	2.0		C/O iron roughneck dies, break out tester subs, and install wear bushing		
5:00	6:00	1.0		Slip and cut drill line		
Daily T	otal	24.0				
		COS	T DA	ATA - THE BELOW DATA AUTOMATICALLY PULLS FROM THE COST SHEET- DO NOT MODIFY		
	DAILY MUD \$ 321 DAILY DRILLING COST \$ 44,103					
	CUM MUD \$ 2,821 CUM DRILLING COST \$ 255,694					

#### 7/8/2016

	DAILY ACTIVITY									
FROM	TO	HRS	CODE	LAST 24 HOURS:						
6:00	7:00	1.0		Slip and cut drill line	and cut drill line					
7:00	8:00	1.0		RU flare line						
8:00	10:30	2.5		PU BHA. Tagged cement stringer at 80	7'.					
10:30	11:30	1.0		Drilled cement, float equipment, and 25	of fo	ormation.				
11:30	13:00	1.5		Performed formation integrity test to 11	lppg	EMW with Pro	Petro.			
13:00	22:00	9.0		Drill and survey from 1025'-2094' with	WOE	3 10K and total	RPM of 205.			
22:00	23:30	1.5		Pump pills for TOOH and run survey.						
23:30	2:30	3.0		TOOH to change BHA to pendulum for	r devi	ation control				
2:30	5:00	2.5		TIH. Wash last 2 joints to bottom						
5:00	6:00	1.0		Drill and survey from 2094-2187						
Daily T	otal	24.0								
	COST DATA - THE BELOW DATA AUTOMATICALLY PULLS FROM THE COST SHEET- DO NOT MODIFY									
	DAILY MUD \$ 5,738 DAILY DRILLING COST \$ 40,944						40,944			
	CUM MUD \$ 8,559 CUM DRILLING COST \$ 319,364									

#### 7/9/2016

				DAILY A	CTIVITY	,	
FROM	TO	HRS	CODI	LAST 24 HOURS:			
6:00	18:00	12.0		Drill and survey from 2187'-3100'. Avg ROP 76	FPH. Inc	rease MW from 8.7 to 9.1 ppg.	
18:00	6:00	12.0		Drill and survey from 3100'-4130'. Avg ROP 86	FPH. Incr	ease MW from 9.1 to 9.4 ppg.	
Daily T	otal	24.0					
		COS	T D	TA - THE BELOW DATA AUTOMATICALL	Y PULLS 1	FROM THE COST SHEET- DO NOT MODIFY	
				DAILY MUD \$	5,644	DAILY DRILLING COST \$	34,175
				CUM MUD \$	14,203	CUM DRILLING COST \$	325,594

RECEIVED: Jan. 12, 2017

# 7/10/2016

			DAILY ACTIVITY
FROM	TO	HRS	LAST 24 HOURS:
6:00	18:00	12.0	Drill from 4130'-4975'. Survey at 4108' was 2.63. Avg ROP 70 FPH. Increase MW from 9.4 to 10.1 ppg.
18:00	6:00	12.0	Drill from 4975'-5575'. Increased WOB f/ 7.5K to 10K. Avg ROP 50 FPH. Increase MW from 10.1 to 10.3 ppg.
Daily T	otal `	24.0	
		COS	ATA - THE BELOW DATA AUTOMATICALLY PULLS FROM THE COST SHEET- DO NOT MODIFY
			DAILY MUD \$ 8,101 DAILY DRILLING COST \$ 33,525
			CUM MUD \$ 22,304 CUM DRILLING COST \$ 359,119

# 7/11/2016

					DAILY	ACTIVITY		
FROM	TO	HRS	CODE	LAST 24 HOURS:				
6:00	18:00	12.0		Drill from 5575'-6460'. Avg ROP 74 Fl	PH. In	crease MW fro	om 10.3 to 11.0 ppg.	
18:00	21:30	3.5		Drill from 6460'-6682'. Avg ROP 63 Fl	PH. Lo	ost 200 bbls of	mud.	
21:30	2:30	5.0		Build 200 bbls of 10.7 ppg mud with 49	% LCM	Ι.		
2:30	3:30	1.0		Pump new mud and establish full circul-	ation.	Drill from 6682	2'-6750'.	
3:30	6:00	2.5		Circulate bottoms up. Check flow and c	connect	ion gas. Well t	rying to flow and high connection gas so increase M	IW to 10.8.
Daily T	otal	24.0						
		COS	T DA	ATA - THE BELOW DATA AUTOMA	TICAL	LY PULLS FI	ROM THE COST SHEET- DO NOT MODIFY	
	•			DAILY MUD	\$	11,808	DAILY DRILLING COST \$	43,821
				CUM MUD	\$	34,112	CUM DRILLING COST \$	402,940

# 7/12/2016

					DAI	LY ACTIVITY		
FROM	TO	HRS	CODE	LAST 24 HOURS:				
6:00	10:30	4.5		Circulate and condition mud raising N	/IW to	10.9 ppg.		
10:30	11:00			Pump 70 bbl 12.5 ppg kill mud.				
11:00	22:00			TOOH with Drill Pipe. Tight hole in	n Mesav	erde from 3000'-3	700'. LD stabilizers and motor.	
22:00	23:30			Wait on drill pipe float since LD MM	1.			
23:30	6:00			TIH to 6500'.				
Daily T	otal	4.5						
		cos	T DA	TA - THE BELOW DATA AUTOM	IATICA	ALLY PULLS FRO	OM THE COST SHEET- DO NOT MODIFY	
				DAILY MU	D \$	15,590	DAILY DRILLING COST \$	74,291
				CUM MU	D \$	49,702	CUM DRILLING COST \$	478,611

#### 7/13/2016

.,,					
				DAILY ACTIVITY	
FROM	TO	HRS	CODI	LAST 24 HOURS:	
6:00	6:30	0.5		Finish TIH f/6500' to 6750'	
6:30	7:30	1.0		Repair hydraulic leak.	
7:30	18:00	10.5		Trip out of hole for logs, check for flow and circulate during trip	
18:00	20:00	2.0		RU loggers.	
20:00	22:30	2.5		Made 3 attempts with logging tools but tagged up at 2263'.	
22:30	23.:30	1.0		RD loggers.	
23:30	0:00	0.5		Remove wear bushing.	
0:00	6:00	6.0		Run 4-1/2, 11.6#, N-80 casing	
Daily T	Total	24.0			
		cos	T D	ATA - THE BELOW DATA AUTOMATICALLY PULLS FROM THE COST SHEET- DO NOT MODIFY	
				DAILY MUD \$ 1,472 DAILY DRILLING COST \$	41,675
				CUM MUD \$ 51,174 CUM DRILLING COST \$	505,046

RECEIVED: Jan. 12, 2017

# 7/14/2016

				DAILY ACTIVITY
FROM	TO	HRS	CODE	LAST 24 HOURS:
6:00	9:30	3.5		Finish Running 4-1/2, 11.6#, N-80 casing. Tag bottom, pull 17 ft
9:30	10:00	0.5		RU Propetro to cement casing
10:00	13:00	3.0		Pump 20 bbl water flush, pump 20 bbl dyed mud flush, saw dye to surface, pump 190 sx, 11#, 3.13 #/gal, pump 100 sx, 13.1#,
				1.81 #/gal, drop plug, pump 104 bbl displacement, bump plug at 11:30 AM, floats held,
13:00	13:30	0.5		Pull 20,000# over, Cameron set slips, cut casing
13:30	18:00	4.5		Start Capstar RD, truck drilling mud to Wonsit disposal, RD ZECO, Haul approx 40 bbl 20% KCl to Anchor Vernal,
				clean mud tanks, release Capstar at 18:00, 7-14-2016
Daily T	otal	12.0		
		COS	T DA	ATA - THE BELOW DATA AUTOMATICALLY PULLS FROM THE COST SHEET- DO NOT MODIFY
	•			DAILY MUD \$ 1,938 DAILY DRILLING COST \$ 79,708
				CUM MUD \$ 49,000 CUM DRILLING COST \$ 584,190

RECEIVED: Jan. 12, 2017

	STATE OF UTAH		FORM 9
ı	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: StML 52861
SUNDR	Y NOTICES AND REPORTS (	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	posals to drill new wells, significantly or reenter plugged wells, or to drill horizon n for such proposals.		7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well			8. WELL NAME and NUMBER: State 28 13
2. NAME OF OPERATOR: KGH OPERATING COMPANY	,		9. API NUMBER: 43047549840000
3. ADDRESS OF OPERATOR: PO BOX 2235 , Billings , M	T, 59103 406 259-8480	PHONE NUMBER:	9. FIELD and POOL or WILDCAT: WILDCAT
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1036 FSL 0971 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	<b>IIP, RANGE, MERIDIAN:</b> 28 Township: 09.0S Range: 25.0E Merid	ian: S	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
Approximate date work will start:	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
SPUD REPORT Date of Spud:			
	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	LI TEMPORARY ABANDON
✓ DRILLING REPORT	L TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
Report Date: 9/13/2016	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
3/10/2010	WILDCAT WELL DETERMINATION	✓ OTHER	OTHER: Completion Report
See attached report	COMPLETED OPERATIONS. Clearly show a street. Form 8, Completion report 19, 2016.	was submitted October	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY January 25, 2017
NAME (PLEASE PRINT) Lisa C. Allen	<b>PHONE NUMBE</b> 406-259-8509	ER TITLE  Executive Assistant/Bookke	eeper
SIGNATURE		DATE	·
N/A		1/12/2017	

# KGH Operating

7/19/16	0730 to 1030	Cameron ins	talled tub	ing head and frac tree		
	1030 to 1430	JDM slickline	e and MS	Services ran gyro survey.	Tagged up at 6660'.	Took survey every 10
	Total Daily co	ost \$	8,320	Cumulative cost	\$ 8,320	

7/21/16	0830 to 930 RU Pioneer Energy Services	
	930 to 1230 Run CBL from 6631 to surface. ETOC at 1020'	
	1230 to 1900 Run pulsed neutron from 6631 to 6000	
	1900 to 1930 RD Pioneer Energy Services	
	•	
	Total Daily cost \$ 12,939 Cumulative cost \$ 21,258	

7/22/16	0730 to 830 RU Can	neron	Pressure Te	ester
	830 to 915 Start test	t, fix l	eaks and co	nnections
	915 to 945 Pressure	teste	d casing and	I frac tree to 6470 and held for 30 minutes.
	945 to 1015 RD Can	neron	Pressure Te	ester
	Total Daily cost	\$	1,527	Cumulative cost \$ 22,936
	Nata Catanda a ad C	مامسات	v 7/22 and 7	7/24 there was no activity

7/23/16	SaturdayNo Activity	y			
7/24/16	SundayNo Activity				
7/25/16	MondayNo Activity				
7/26/16	715 to 845 RU hardli	ine to	flowback tan	k and RU swabbers.	
	845 to 1215 Swab fro	om su	rface to 3100	)'	
	1215 to 1245 RD De	lsco s	wabbers		
	Total Daily cost	\$	3,702	Cumulative cost \$ 26,638	

7/27/16	745 to 815 RU Delsco swabbers.	
	815 to 1530 Swab well down from 3200' to 6580'. Total water swabbed for last 2 days ~100 bbls.	
	1530 to 1600 RD swabbers	
	1715 to 1800 RU water truck, unload 50 bbls of 4% KCl with biocide into well bore, and RD water truck	ck
	Total Daily cost \$ 3,462 Cumulative cost \$ 30,065	

7/28/16	645 to 730 RU Cutters wireline
	730 to 815 RIH with 10' perf gun loaded 6 spf with 19 gram charges. Perf from 6575-85'. FL before shot at 3300
	and FL after at 2700'. Well would not flow.
	815 to 1400 Decided to breakdown perfs so waited on acid, KCl water, and hot oiler. Installed deadmen.
	1400 to 1445 RU hot oiler and filled hole with 4% KCl water then RU wireline and filled bailer with acid
	1430 to 1615 RIH with acid in bailer and placed acid f/6572-6582 then TOOH with wireline.
	1615 to 1630 RU hot oiler and breakdown perfs as follows: Perfs broke at 1700# (~4700# BHP), ISIP at 1300#.
	Pumped about 2 bbls into perfs then started immediate flowback
	1630 to 1640 Well flowed steady but continually smaller stream of water.
	1640 to 1650 Well flowed in slugs
	1650 to 1730 Well gurgling
	1730 to 1800 SWIFN. No pressure buildup in .5 hours.
	Total Daily cost \$ 9,511 Cumulative cost \$ 39,576

7/29/16	Pressure gauge showed 500 psi. Opened to tank and blew down immediately.						
	0730 to 0815 RU swabbers. Initial tank gauge at 1' 10.5".						
	0815 to 1000 Made 9 swab runs. Shut down to check for inflow.						
	1000 to 1100 Checked for inflow. No flow after 1 hour.						
	1100 to 1330 Made 6 more swab runs. Last pull from 3900'. Changed swab cups.						
	1330 to 1600 Made 6 more swab runs. Last pull from 5500'. Final tank gauge at 3' 6".						
	1600 to 1630 Waited 30 minutes before RIH and tag fluid to allow for better fluid level reading.						
	1630 to 1700 TIH and tag fluid level at 5450'.						
	Total fluid recovery to tank ~88 bbls (21 swab runs)						
	Total capacity of casing to 5450' is ~85 bbls.						
	· · · · · · · · · · · · · · · · · · ·						
	Note: Daily costs include tubing head and well head tangible items (\$12370)						
	, , ,						
	Total Daily cost \$ 15,422 Cumulative cost \$ 54,998						

7/30/16	Pressure gauge showed 0 psi. Opened it up and well on vacuum. Skim of oil on tank.
	715 to 730 RU Swabbers
	730 to 830 TIH on run 1 and tag fluid at 5300' and pull from 5600'. FL at end of yesterday at 5450'
	Run 2 tag fluid at 5550' and pull from 5900'. Recovered ~5 bbls.
	830 to 915 Released rig and rigged down.
	Total Daily cost \$ 1,432 Cumulative cost \$ 56,530

8/9/16	Prep for frac from 8/1/2016 to 8/9/201	6	
	Move in and RU flowback equipment.	Move in and fill 4-1000 bbl frac tanks.	Move in light plants, trash basket
	and porta johns.		
	Total Daily cost	Cumulative cost \$ 71,713	

# KGH Operating

8/10/16	0700 to 1000 Move in and RU Halliburton Frac Fleet
	1000 to 1415 Wait on clay stabilizer chemical
	1415 to 1615 Pump stage 1 as per procedure
	1615 to 1730 RU wireline, RIH set CFP at 6529' and perf 6 spf from 6500-6510' then POOH and rig down wireline
	1715 to 1815 clean out plugged blender
	1815 to 1930 pump stage 2 as per procedure
	Total clean volume pumped 2833 bbls (load to recover)
	1930 to 2100 RD Halliburton iron near well head, RU flowback iron. CP 1150 psi
	2100 to 0700 Open well to flowback tank. Initial FCP=300 psi Final FCP=10 psi
	Recovered 1220 bbls of water so 43% of load has been recovered. Tank has skim of oil and well was
	making gas.
	700 Shut well in to build pressure
	Total Daily cost \$ 172,607 Cumulative cost \$ 250,551

8/11/16	0700 to 900 Well shut in and built pressure from 10 psi to 150 psi
	0900 to 1000 Opened well to tank and it made 35 bbls of water
	1000 to 1200 Well shut in and built pressure from 30 psi to 130 psi
	1200 to 1300 Opened well to tank and it made 15 bbls of water
	1300 to 0700 Well shut in waiting on work over rig
	Note: Corrected total water produced since flowback started is 1200 bbls so 42% of load has been recover
	Total Pathy and the A 905 Completion and the 955 000
	Total Daily cost \$ 4,625 Cumulative cost \$ 255,226

8/12/16	0800 Rig on location. SICP was 125 psi. Open well to tank.
	0800 to 1300 Move in rig tank, rig pump, pipe racks and RU work over rig.
	1300 to 1400 Unload and tally tubing.
	1400 to 1500 Run lines to rig tank, move BOPs and hookup hydraulic lines to prep for NU
	1500 to 1600 Open well to rig tank, ND frac tree, NU BOPE
	1600 to 1700 Set floor, PU tongs and slips, prep for tripping in on Mon. SDFWE
	Note: Well flowed a total of 48 bbls with cumulative of 1248 or 44% of load recovered.
	Total Daily cost \$ 20,982 Cumulative cost \$ 276,208

8/15/16	0600 SICP was 25 psi after being SI for weekend. Open well to tank.	1
	0630 to 0700 PU bit and bit sub. Prep to TIH.	
	0700 to 0730 Started in hole but well flowing up tubing. POOH for pump off bit sub.	
	0730 to 0930 Wait for POBS with string float.	
	0930 to 1300 TIH and tag plug at 6560'.	
	1300 to 1400 Hookup hard line to upright, circulate surface equipment to clean up lines and hoses. CP	built to 75.
	1400 to 1630 Fill tbg, drill plug in 10 min., circ bottoms up (2X), clean out to 6663', circ bottoms up (2X).	_
	1630 to 1730 LD 4 joints, land tubing at 6531', ND BOP, NU production tree. Drop ball and pump off bit.	. 1100 psi
	drop when bit was pumped off.	1
	1730 Open well to tank.	
	Note: There is a 30' difference between wireline log depth from CBL and tubing depths.	
	CFP was set at 6529' WL depth but tagged at 6560' with tubing.	
		1
	Total Daily cost \$ 13,192 Cumulative cost \$ 289,960	1

8/16/16	0700 SICP was 20 psi after being SI over night. Open well to tank. Minimal flow to tank then dead.
	0700 to 0800 RU swab equipment. RD miscellaneous equipment for rig move.
	0800 to 1000 Made 14 swab runs and recovered 68 bbls of fluid. Ending FL at 600' and pulling from 2500'.
	1000 to 1130 Well SI while RD rig and RU swabbers.
	1130 to 1800 Made 17 swab runs and recovered 178 bbls of fluid. Ending FL at 1200' and pulling from 330
	Estimated total inflow from reservoir today was total recovered minus total drop in casing.
	246-17=229 bbls of inflow from reservoir
	Percent of load recovered = 53%
	Total Daily cost \$ 6,120 Cumulative cost \$ 298,772

8/17/16	0700 SICP was 0 psi and TP was 50 psi after being SI over night. Open well to tank, died quickly.
	0700 to 1500 Made 23 swab runs. Well started to flow after swabs.
	1500 to 1730 Made 5 swab runs and well kicked off.
	1800 Flowing to tank. FTP=80 psi, CP=50 psi Turned well over to flowback crew.
	Total bble recovered for the day on of 1000, 245 bble
	Total bbls recovered for the day as of 1800=245 bbls
	Percent of load recovered as of 1800 = 62%
	Total Daily cost \$ 5,277 Cumulative cost \$ 304,549

8/18/16				uipment. (See flowback report for details)
	24 hr avç	440 N و	1CFD, 40 BC	OPD, 263 BWPD
	Total bbls recovered	I for the	e day 263 bb	ls
	Percent of load reco	vered a	at end of day	' = 76%
			•	
	Total Daily cost	•	E 647	Cumulativa and \$ 242,244
	TOTAL DAILY COST	20	5,617	Cumulative cost \$ 313,344

#### **KGH Operating**

8/19/16	0000 to 0800 Flowing thru flowback equipment. (See flowback report for details)	
	0800 Shut well in for evaluation. Released flowback crew.	
	8 hr avg 315 MCFD, 5 BOPD, 140 BWPD	
	Total bbls recovered for the day as of 0800=53 bbls	
	Percent of load recovered as of 0800 = 77%	
	Total Daily cost \$ 2,630 Cumulative cost \$ 315,974	
	10th Dany 605t	
2/22//2		
8/23/16	1100 Shot casing fluid level and found it at ~3230'.	
	CP = 1440#, TP = 1300#	
	Hauled off 130 bbls of water to disposal	
	Total Daily cost \$ 934 Cumulative cost \$ 317,092	
8/24/16	0900 to 1100 RU hard line to tank with choke.	

8/24/16	0900 to 1100 RU hard line to tank with choke.
	1100 to 1900 Flow well to tank. (See flowback report for details)
	ICP = 1420# FCP = 1175#, ITP = 1300# FTP = 750#
	Total oil produced for the 8 hour flow = 63 bbls
	Total water produced for the 8 hour flow = 25 bbls
	Percent of load recovered at end of 8 hour flow = 78%
	Total Daily cost \$ 977 Cumulative cost \$ 318,069

8/25/16	0700 Shot fluid level and found at 5400'.
	0700 to 1500 Flow well to tank. (See flowback report for details)
	ICP = 1400# FCP = 720#, ITP = 1175# FTP = 250#
	Opened choke from 14 to 24 after 4 hours of flow
	·
	Total oil produced for the 8 hour flow = 35 bbls
	Total water produced for the 8 hour flow = 34 bbls
	Percent of load recovered at end of 8 hour flow = 79%
	Total Daily cost \$ 677 Cumulative cost \$ 318,746

# KGH Operating

8/26/16	0700 Shot fluid level and found at 5240'.						
	0700 to 1500 Flow well to tank. (See flowback report for details)						
	ICP = 1120# FCP = 700#, ITP = 1000# FTP = 225#						
	Flowed on 24 choke for all 8 hours						
	Note: From 1415 to 1445 well was shut in with plans to run pressure buildup test but had battery probler						
	Also from 1300 to 1330 well was shut in for echometer surveys.						
	Total oil produced for the 8 hour flow = 30.5 bbls						
	Total water produced for the 8 hour flow = 39.5 bbls						
	Percent of load recovered at end of 8 hour flow = 81%						
	Total Daily cost \$ 677 Cumulative cost \$ 319,423						

8/27/16	0700 Shot fluid level and found at 5150'.						
	0700 to 1100 Flow well to tank. (See flowback report for details)						
	ICP = 1065# FCP = 690#, ITP = 950# FTP = 300#						
	Flowed on 24 choke for all 4 hours						
	1100 to 1130 TIH with pressure survey. Had surface leak in W/L BOP so TOOH.						
	1130 to 1210 TOOH and c/o BOP. TIH and set gauges at 6506'. Start survey. Plan to run for 72 hours						
	Total oil produced for the 4 hour flow = 16.5 bbls						
	Total water produced for the 4 hour flow = 16 bbls						
	Percent of load recovered at end of 8 hour flow = 81%						
	Total Daily cost \$ 1,927 Cumulative cost \$ 321,350						

8/28/16	Well SI with pressure gauges in hole.								
8/29/16	Well SI with pressure gauges in hole. CP at 1700 was 1200 psi.								
8/30/16	Well SI with pressure gauges in hole. CP at 0930 was 1220 psi. Fluid level was ~4675'.								
8/31/16	Well SI with pressure gauges in hole. CP at 0900 was 1245 psi. Fluid level was ~4585'.								
	0000 to 1300 SI with pressure gauges. CP at 1730 was 1260 psi. TP at 1730 was 1150 psi.								
•	1300 to 1730 TOOH with gauges, stopping every 100' for gradients until 2500' then every 250'.								
•	Delivered sand and gravel for tank pad								
	Installed containment liner and built pad for tanks								
	•								
	Percent of load recovered as of 8/31/16 = 81%								
	Total Daily cost \$ 6,227 Cumulative cost \$ 336,910								

Set 3 production tanks, stairs, and landing.										
No planned activity until after Labor Day weekend.										
Total Daily cost	\$	27,750	Cumulative cost \$ 366,710							
	No planned activity u	No planned activity until at	No planned activity until after Labor I							

# **KGH Operating**

9/2/16	No activity							
9/3/16	No activity							
9/4/16	No activity							
9/5/16	No activity (Labor Day)							
9/6/16	CP at 0900 was 1360 psi. Fluid level was 4083'.							
	Installed valves and plugs in production tanks.							
	Delivered separator and fire tubes for tanks.							
	Hauled test separator, glycol, and flare stack back to town.							
	Removed flowback lines and hauled back to town.							
	Transferred oil from flowback tank to production tank. Drained ~130 bbls of water and hauled to disposa							
	Total Daily cost \$ 34,277 Cumulative cost \$ 401,187							

9/7/16	No activity								
9/8/16	No activity								
9/9/16	CP at 0900 was 1395 psi and TP was 1275 psi Fluid level was 3955'.								
	Start facility construction. Deliver and set flare, fabricate flow lines and gas supply lines.								
	Build tank berm, finish liner install, and fill with gravel.								
	Install tank fire tubes and exhaust stacks, install scrubbers, set and level separator, install separator exhau								
	Total Daily cost \$ 6,627 Cumulative cost \$ 414,314								

9/10/16	Finish facility construction at 90%. Still need to install trace heat lines and insullate all flow lines and gas sup							
	lines as well as complete automation installation.							
9/11/16	No activity.							
9/12/16	CP at 0900 was 1420 psi and TP was 1275 psi Fluid level was 3830'.							
	Started producing well through separator at 1015 AM. (See flowback report for details)							
	From 1015 to 1700 well flared 60 MCF of gas, 38 BO, and 0 BW on a 14 choke.							
	Total Daily cost \$ 677 Cumulative cost \$ 424,991							

9/13/16	CP at 0800 was 1430 psi and TP was 775 psi.							
	From 0800 to 0830 shut well in to work on flare and water dump.							
	From 0900 to 0915 shut well in to change orifice plate in meter run.							
	From 0800 to 1700 well flared ~77 MCF, 32BO, and 6 BW on a 14 choke.							
	Total Daily cost \$ 677 Cumulative cost \$ 425,668							

	STATE OF UTAH			FORM 9
1	DEPARTMENT OF NATURAL RESOU DIVISION OF OIL, GAS, AND M		3	5.LEASE DESIGNATION AND SERIAL NUMBER: StML 52861
SUNDR	RY NOTICES AND REPORTS	S ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	oposals to drill new wells, significant reenter plugged wells, or to drill hori n for such proposals.			7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well				8. WELL NAME and NUMBER: State 28 13
2. NAME OF OPERATOR: KGH OPERATING COMPANY	,			<b>9. API NUMBER:</b> 43047549840000
<b>3. ADDRESS OF OPERATOR:</b> PO BOX 2235, Billings, M	T, 59103 406 259-8		NE NUMBER: xt	9. FIELD and POOL or WILDCAT: WILDCAT
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1036 FSL 0971 FWL				COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 28 Township: 09.0S Range: 25.0E Me	eridian:	S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDIC	ATE N	ATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION			TYPE OF ACTION	
	ACIDIZE		CHANGE TUBING COMMINGLE PRODUCING FORMATIONS CRACTURE TREAT PLUG AND ABANDON RECLAMATION OF WELL SITE SIDETRACK TO REPAIR WELL VENT OR FLARE SI TA STATUS EXTENSION DITHER	CASING REPAIR  CHANGE WELL NAME  CONVERT WELL TYPE  NEW CONSTRUCTION  PLUG BACK  RECOMPLETE DIFFERENT FORMATION  TEMPORARY ABANDON  WATER DISPOSAL  APD EXTENSION  OTHER: Drilling Report  Pepths, volumes, etc.  Accepted by the Utah Division of Oil, Gas and Mining  FOR RECORD ONLY  February 02, 2017
NAME (PLEASE PRINT)	PHONE NUM	/BER	TITLE	
Lisa C. Allen SIGNATURE	406-259-8509		Executive Assistant/Bookke	eeper
N/A			1/25/2017	

# KGH Operating State 28-13 Drilling Reports

# 7/7/2016

	DAILY ACTIVITY									
FROM	TO	HRS	CODE	LAST 24 HOURS:						
6:00	11:00	5.0		Move and set all rig components in place.						
11:00	23:00	12.0		RU equipment and NU BOPE. RU closed loop system, haul in mud products, fuel, water, and cuttings disposal bins.						
23:00	3:00	4.0		Test BOPE (250/5000) and surface casing (1500)						
3:00	5:00	2.0		C/O iron roughneck dies, break out tester subs, and install wear bushing						
5:00	6:00	1.0		Slip and cut drill line						
Daily T	otal	24.0								
		COS	T DA	ATA - THE BELOW DATA AUTOMATICALLY PULLS FROM THE COST SHEET- DO NOT MODIFY						
	DAILY MUD \$ 321 DAILY DRILLING COST \$ 44,103									
	CUM MUD \$ 2,821 CUM DRILLING COST \$ 255,694									

# 7/8/2016

	DAILY ACTIVITY								
FROM	TO	HRS	CODE	LAST 24 HOURS:					
6:00	7:00	1.0		Slip and cut drill line					
7:00	8:00	1.0		RU flare line					
8:00	10:30	2.5		PU BHA. Tagged cement stringer at 807'.					
10:30	11:30	1.0		Drilled cement, float equipment, and 25' of formation.					
11:30	13:00	1.5		Performed formation integrity test to 11 ppg EMW with ProPetro.					
13:00	22:00	9.0		Drill and survey from 1025'-2094' with WOB 10K and total RPM of 205.					
22:00	23:30	1.5		Pump pills for TOOH and run survey.					
23:30	2:30	3.0		TOOH to change BHA to pendulum for deviation control					
2:30	5:00	2.5		TIH. Wash last 2 joints to bottom					
5:00	6:00	1.0		Drill and survey from 2094-2187					
Daily T	`otal	24.0							
		COST	r n	ATA - THE BELOW DATA AUTOMATICALLY PULLS FROM THE COST SHEET- DO NOT MODIFY					
				DAILY MUD \$ 5,738 DAILY DRILLING COST \$	40,944				
	CUM MUD \$ 8,559 CUM DRILLING COST \$ 319,364								

# 7/9/2016

	DAILY ACTIVITY								
FROM	TO	HRS	CODI	LAST 24 HOURS:					
6:00	18:00	12.0		Drill and survey from 2187'-3100'. Avg ROP 76 FPH	. Increase MW from 8.7 to 9.1 ppg.				
18:00	6:00	12.0		Drill and survey from 3100'-4130'. Avg ROP 86 FPH.	Increase MW from 9.1 to 9.4 ppg.				
Daily T	otal	24.0							
			•						
		COS	T D	TA - THE BELOW DATA AUTOMATICALLY PU	LLS FROM THE COST SHEET- DO NOT MODIFY	?			
	DAILY MUD \$ 5,644 DAILY DRILLING COST \$ 34,175								
	CUM MUD \$ 14,203 CUM DRILLING COST \$ 325,594								

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# 7/10/2016

DAILY ACTIVITY								
FROM	TO	HRS	CODE	LAST 24 HOURS:				
6:00	18:00	12.0		Drill from 4130'-4975'. Survey at 4108	3' was	s 2.63. Avg ROF	P 70 FPH. Increase MW from 9.4 to 10.1 ppg.	
18:00	6:00	12.0		Drill from 4975'-5575'. Increased WOI	B f/ 7	.5K to 10K. Av	g ROP 50 FPH. Increase MW from 10.1 to 10.3 ppg.	
Daily T	otal	24.0						
	COST DATA - THE BELOW DATA AUTOMATICALLY PULLS FROM THE COST SHEET- DO NOT MODIFY							
		COS.	LDE	ATA - THE BELOW DATA AUTOMA	TIC	ALLI FULLS F		
				DAILY MUD	\$	8,101	DAILY DRILLING COST \$	33,525
	CUM MUD \$ 22,304 CUM DRILLING COST \$ 359,119							

# 7/11/2016

	DAILY ACTIVITY						
FROM	TO	HRS	CODE	LAST 24 HOURS:			
6:00	18:00	12.0		Drill from 5575'-6460'. Avg ROP 74 FPH. Increase MW from 10.3 to 11.0 ppg.			
18:00	21:30	3.5		Drill from 6460'-6682'. Avg ROP 63 FPH. Lost 200 bbls of mud.			
21:30	2:30	5.0		Build 200 bbls of 10.7 ppg mud with 4% LCM.			
2:30	3:30	1.0		Pump new mud and establish full circulation. Drill from 6682'-6750'.	•		
3:30	6:00	2.5		Circulate bottoms up. Check flow and connection gas. Well trying to flow and high connection gas so increas	e MW to 10.8.		
Daily T	Daily Total 24						
	COST DATA - THE BELOW DATA AUTOMATICALLY PULLS FROM THE COST SHEET- DO NOT MODIFY						
	DAILY MUD \$ 11,808 DAILY DRILLING COST \$ 43,821						
				CUM MUD \$ 34,112 CUM DRILLING COST \$	402,940		

# 7/12/2016

DAILY ACTIVITY								
FROM	TO	HRS	CODE	LAST 24 HOURS:				
6:00	10:30	4.5		Circulate and condition mud raising M	IW to 1	10.9 ppg.		
10:30	11:00			Pump 70 bbl 12.5 ppg kill mud.				
11:00	22:00			TOOH with Drill Pipe. Tight hole in	Mesav	erde from 3000'-3	3700'. LD stabilizers and motor.	
22:00	23:30			Wait on drill pipe float since LD MM				
23:30	6:00			TIH to 6500'.				
Daily T	otal	4.5						
		cos	T DA	TA - THE BELOW DATA AUTOM	ATICA	LLY PULLS FRO	OM THE COST SHEET- DO NOT MODIFY	
				DAILY MUI	\$	15,590	DAILY DRILLING COST \$	74,291
				CUM MUI	\$	49,702	CUM DRILLING COST \$	478,611

#### 7/13/2016

771572010								
DAILY ACTIVITY								
FROM	TO	HRS	CODE	LAST 24 HOURS:				
6:00	6:30	0.5		Finish TIH f/6500' to 6750'				
6:30	7:30	1.0		Repair hydraulic leak.				
7:30	18:00	10.5		Trip out of hole for logs, check for flow and circulate during trip				
18:00	20:00	2.0		RU loggers.				
20:00	22:30	2.5		Made 3 attempts with logging tools but tagged up at 2263'.				
22:30	23.:30	1.0		RD loggers.				
23:30	0:00	0.5		Remove wear bushing.				
0:00	6:00	6.0		Run 4-1/2, 11.6#, N-80 casing				
Daily T	Daily Total 24.0							
	COST DATA - THE BELOW DATA AUTOMATICALLY PULLS FROM THE COST SHEET- DO NOT MODIFY							
	DAILY MUD \$ 1,472 DAILY DRILLING COST \$ 41,675							
-				DAILI MOD \$ 1,472 DAILI DRILLING COST \$	41,075			
				CUM MUD \$ 51,174 CUM DRILLING COST \$	505,046			

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# 7/14/2016

	DAILY ACTIVITY						
FROM	TO	HRS	CODE	LAST 24 HOURS:			
6:00	9:30	3.5		Finish Running 4-1/2, 11.6#, N-80 casing. Tag bottom, pull 17 ft			
9:30	10:00	0.5		RU Propetro to cement casing			
10:00	13:00	3.0		Pump 20 bbl water flush, pump 20 bbl dyed mud flush, saw dye to surface, pump 190 sx, 11#, 3.13 #/gal, pump 100 sx, 13.1#,			
				1.81 #/gal, drop plug, pump 104 bbl displacement, bump plug at 11:30 AM, floats held,			
13:00	13:30	0.5		Pull 20,000# over, Cameron set slips, cut casing			
13:30	18:00	4.5		Start Capstar RD, truck drilling mud to Wonsit disposal, RD ZECO, Haul approx 40 bbl 20% KCl to Anchor Vernal,			
				clean mud tanks, release Capstar at 18:00, 7-14-2016			
Daily T	otal	12.0					
	COST DATA - THE BELOW DATA AUTOMATICALLY PULLS FROM THE COST SHEET- DO NOT MODIFY						
	DAILY MUD \$ 1,938 DAILY DRILLING COST \$ 79,708						
				CUM MUD \$ 49,000 CUM DRILLING COST \$ 584,190			

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